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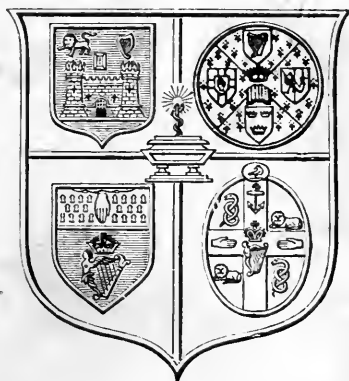
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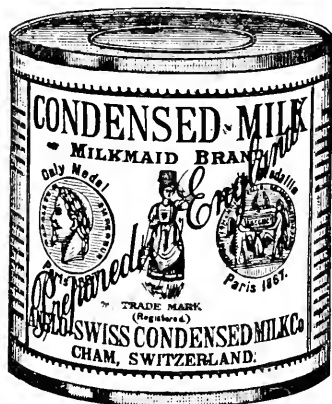
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20. The Hospital. London: The Scientific Press Company.
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THE DUBLIN JOURNAL

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DECEMBER 1, 1897.

PART I.

ORIGINAL COMMUNICATIONS.

ART. XVIII.—*Operation in Intestinal Obstruction.** By SIR WILLIAM THOMSON, President, Royal College of Surgeons, Ireland; Surgeon to the Richmond Hospital.

I WAS reading the other day some of the late Sir Benjamin Ward Richardson's papers, when I came upon one bearing the title—"What is the proper time for Surgical Interference in Intestinal Obstruction?" He was a close clinical observer, and a broad-minded cultured physician, and I read with the greatest interest his discussion of this question. We have to deal with the fact that these cases usually come, in the first instance, into the hands of the medical rather than the surgical practitioner. It is reasonable to expect that this should be so, for the ordinary sick man does not see that there can be anything involving operation in an attack which popularly is described as a pain in the stomach with vomiting. The paper suggested to me that I might ask your attention to a few points in connection with this subject. It has often been before the Academy and other like bodies, but all acknowledge the difficulties which surround it; and it can only be by further observation and careful noting of signs and symptoms that we can make any approach to an answer which, as deciding a course of treatment, can be of any real benefit.

* An Introductory Address delivered at the Surgical Section of the Royal Academy of Medicine in Ireland, on Friday, November 12, 1897.

The initial difficulty which we encounter is that there are so many conditions threatening life which present symptoms of an almost identical character. We are accustomed to take three of these as very typical—pain, vomiting, and constipation—and as practically constituting a guiding trio. But if we apply them as a test to the reading of a case we find ourselves bound to include such affections as peritonitis, gall-stones, volvulus, strangulation, pressure of tumours, stricture, and even a calculus in the ureter. Now, not all of these require operation of necessity, and, therefore, we must seek for other elements of help. The age of the patient, the antecedent history, the condition of the abdomen, the amount of distension, whether the constipation has been chronic or has been gradually increasing, the character of the urine, the quality of the fæces, the temperature—which is not very reliable—and the actual constitutional state of the patient as indicating collapse or shock.

Now the tangle to be unravelled is a very troublesome and serious one. It is often said that we see these cases too late, and that is true; but let us be quite fair about this matter. We generally see the case when the question of operation and no other is to be determined. If we had seen the patient at first we should in most cases have been just as reserved as our colleague, and all I would suggest is that a surgeon should be consulted early, in order that, if operation is necessary, he who becomes the responsible actor should be able to select the most suitable time for his operation.

And I must say, further, that all surgeons are not agreed as to operation at all. You all recollect, I have no doubt, the dicta of Mr. Jonathan Hutchinson, a wise and very experienced surgeon. Before the British Medical Association, in 1878, he advocated taxis in obstruction, and declared that “in the present state of surgical knowledge exploratory operations for the relief of abdominal obstruction, the cause of which cannot be diagnosed, are not warrantable.” Elsewhere, however, Mr. Hutchinson introduced the alternative—“or the operation can be made much less dangerous,” which in these days makes a difference.

It is only nineteen years ago since this opinion was expressed by so sound a surgeon; but it is a proof of how

rapidly we have travelled in the interval when I mention that in the year following Mr. Howard Marsh mentions in a paper that "several operators have reduced the mortality of ovariectomy to less than 30 per cent." Well, the 30 per cent. has been abolished, and we are doing much better in operation for intestinal obstruction. Let me refer again to the physician Richardson in this connection. He says, "I fail to find in the list of examples which have come under my notice during a long career, one single instance in which recovery has taken place after the appearance of stercoraceous vomiting in the acute form, except in one where operation was carried out. . . . We did not operate in another case because we were in the dark. My argument in such a dilemma now would be—"Because we are in the dark let us let in the light." That is, I think, a concise way of putting the modern surgical view.

Let us just consider in order the symptoms which belong to this condition of acute obstruction. It is an advantage to group them, and if possible to recognise their true significance.

I take vomiting first. In its ordinary form this is a symptom which attends many constitutional states which have nothing whatever to do with the affection we are considering. But here the vomiting has certain peculiarities. It is not the first symptom. It follows the onset of abdominal pain which has come on suddenly or gradually, and we have therefore the occurrence of two symptoms which have great importance. The vomiting varies as to quality, and this has a certain relation to the position of the obstruction. If this is high up—in the region of the duodenum, or jejunum—the vomiting comes on very quickly, because they are very sensitive viscera. But the material ejected is not stercoraceous in the ordinary sense. It first consists of stomach contents, and then of material undergoing digestion in the first reaches of the intestinal canal. But as we go lower down to the end of the small intestine, and get to the large intestine, the vomiting comes on at greater interval from the origin of the attack, passes through the stages I have noted, and then becomes stercoraceous, just as we so often see it in strangulated hernia. Therefore I think it will be admitted

that vomiting in these cases does tell us, by the order of its appearance and its character, that we have to deal with obstruction, and where that obstruction probably is.

This symptom is of great importance; and it was upon it that Sir Benjamin Richardson answered his own question when he said, "Is there any single symptom which, being present, says at once and imperatively, in cases of acute obstruction of the intestinal canal, now is the time—whatever may be the diagnosis of the case—now is the time to operate. . . . I answer there is such a symptom, and the symptom I refer to is that of stercoraceous vomiting." The late Mr. Greig Smith laid down a working rule which was—that operation should be undertaken if pronounced vomiting had occurred three times. Of course there was no special virtue in the number. It only gave a reasonable time to make the character of the symptom clear.

Pain is of value in locating the trouble within the abdomen, but it rarely indicates the actual site of the obstruction. It has, however, characters of its own. In chronic obstruction it is not severe; and it differs from that of the acute affection which comes on suddenly, and is usually intense. Sometimes there are intervals of quiescence, sometimes the pain may be almost continuous, and the difference seems to depend upon the tightness of a constriction, and on whether there still remains any portion of the lumen through which matter may pass.

Temperature is often misleading, and is only to be mentioned to warn against reliance being placed upon it. How often have we seen patients die of peritonitis, and yet the chart gave little or no indication of the intensity of the disease?

On the constipation itself we must also not place too much reliance. It depends very much upon the position of the stoppage. If it is high up in the intestine, motions may persist for some time, and even a diarrhoea may appear for a day or two. If the stoppage is in the large intestine we have the constipation from the outset, although sometimes a loaded rectum below the point may puzzle us by discharging its contents.

A good deal of weight has been attached to the presence

of dulness in the loin in these cases, due to free fluid in the peritoneal cavity. It is not always present. It depends upon peritonitis, but that is not always of the serous variety, and no appreciable exudation may be present. When it is present it is, however, a valuable aid, and should be looked for. Here I may recall some cases reported before the Clinical Society of London in 1879 by Dr. Markham Skerritt, of Bristol. In the first there was intestinal obstruction, with fibrinous exudation. During life there was dulness in both flanks when the patient lay on his back. It could be detected as high as the anterior superior iliac spine. When the patient was turned on his side the side which was uppermost became very resonant, and during the progress of the case the sign became more marked. *Post mortem*, it was found that there was no fluid in the peritoneal cavity, but the intestines were filled with fluid fæces and gas. In the second case the dull note could be produced up to the anterior superior iliac spine; the resonance appeared when the patient was placed on his side, and on *post-mortem* examination no fluid was found in the peritoneal cavity. Dr. Skerritt says the peculiarity was due to the fact that the gas and fluid in each coil of intestine necessarily obeyed the same physical law as do the gas-containing intestines and the free fluid in ordinary ascites—that is, that the gas would rise to the top in whatever position the patient lay, and the fæces would fall to the bottom. The observation is an important one. Fluid in the loin is not invariably present; and we may be betrayed into a declaration that it is there when in reality it was not there, and when the signs are due to the fluid and gas within the intestine itself.

Two other localising symptoms may be mentioned—the increase in the indican of the urine found by Jappe when the small but not the large intestine is obstructed; and the second described by Dr. Barlow in “Guy’s Hospital Reports” for 1844. He declared that urine was suppressed just in proportion to the nearness of the stoppage to the beginning of the small intestine, and that this does not occur where the large intestine is engaged; but this is not invariably true. Other considerations are the character of the distension and the time of its appearance. It is naturally somewhat slow

to become evident when the mischief attacks the large bowel, but once it begins it extends rapidly. In the case of the small intestine, if the obstruction is high up, the abdomen ought not, theoretically, to become distended. But even here other things happen to upset our expectations. If peritonitis supervene we may expect some adhesions or bendings here and there which will stay the passage of flatus to the anus, or the injury to the bowel may be such as to produce paralysis, and so be followed by the accumulation of gas within the gut.

Added to all these, however, we must add for consideration the general condition of our patients, the character of the facial expression, and the collapse which in some form is always present, and is even progressive.

I have brought before you a series of tests which are generally accepted in the effort to clearing up the problem before us, and I have tried to point out their individual value. If we were able to apply them all to any case we should probably have small difficulty in dealing with it. But unfortunately that is not so, and our success will depend upon the ability with which we can select such a combination of them as will lead us aright. I place the greatest value upon vomiting of a stercoraceous nature, but we should not fail to avail ourselves of every possible corroborative element.

You have gathered from what I have said that I wish only to deal with the surgical aspect of this great question. I wish to start from a recognition of the affection, and leave out of consideration all medical treatment. But indeed, in the vast majority of cases of acute obstruction to which I have confined myself, there is no room whatever for medical treatment. It is only time lost. And passing first to what may be called bloodless surgical interference—*taxis*—I must declare that it has no attraction whatever for me. Here and there a case may recover, but the surgeon ought to be sure not only of the locality of the obstruction, but also of the very nature of it, before he begins to manipulate the whole mass of intestines. What would happen if a nipped bowel were almost gangrenous, or if the intestine were distended like a drum?

Two days ago I was returning the bowel in a case of large

hernia, when, even under very moderate pressure with my fingers, the peritoneum suddenly snapped with a sound like a small explosion, and there was a bleeding rent of a couple of inches long. Would this be a desirable injury to add to the peritoneum in a case of acutely obstructed intestine? I think not.

The whole of the opposition to operation in these cases is based upon the unfortunately fatal results which have followed it. But I am glad to say that these are becoming less in number just in proportion as the great gravity of the affection is being realised. We may ask in return what proportion of cases not operated upon recover? We hear of the sloughing away of a volvulus and such things, and the patient gets well. But how many? These things are practically miracles—they are contrary to the course of nature. We do not conduct the ordinary affairs of life on the supposition that a miracle is likely to happen; and I suppose a practitioner who relied on medicine to cure, say a strangulation, would be horrified if it were put to him that that is practically what he is doing. Granted the recognition of the character of the case, there is only one thing to be done, and that is—to explore. It is not the opening of the abdomen that kills; it is the fact that that is usually done when by delay everything is arrayed against success.

ART. XIX.—*Significance of Dilatation or Gastrectasia in Functional and Organic Diseases of the Stomach.*^a By
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Hospital, Dublin.

GASTRIC dilatation, or gastrectasia, in one or other of its forms, is so frequently present in almost all organic or functional affections of the stomach, and its existence is so frequently overlooked by us in hasty examinations of that organ, that I may be pardoned for going into the details of the various affections in which this symptom is met with. I may say, at the outset, dilatation of the stomach is not a disease, but only a symptom of disease.

^a Read in the Section of Medicine of the Royal Academy of Medicine in Ireland, March 12, 1897. [For the discussion on this paper, see page 65.]

Gastric dilatation presents itself in two forms—complete dilatation and incomplete or partial dilatation.

In complete dilatation all the coats of the entire stomach are stretched, and its cavity enlarged to twice or perhaps thrice its original size, the organ extending across the abdomen from one hypochondriac region to the other; or when the stomach is dislocated downwards by the weight of its own fluid contents and the yielding of the gastro-hepatic ligaments, we may find it occupying the entire of the lower portion of the abdominal cavity, extending from one iliac region to the other. In the second form—incomplete or partial dilatation, sometimes spoken of as distension of the stomach, which is quite a different condition—we find only one portion of the stomach dilated—the cardiac end. That this form is a true dilatation and not a distension is shown by its liability to persist as long as the causes that produce it are present; in this it resembles dilatation of the cavities of the heart. In this variety the dislocation is upwards, by which I mean the yielding of the stomach wall at this portion causes it to press upwards against the diaphragm, or upwards and to the left in front of the spleen, where it does not meet with the same resistance as is offered by the diaphragm.

When the latter is in a lax condition the dilated stomach presses directly upwards against the heart, producing a sense of uneasiness in the cardiac region, pain in left side, and occasional attacks of syncope.

The first variety, or that of complete dilatation, is mainly associated with organic disease of the stomach itself, accompanied by obstruction at the pyloric end. Obstruction giving rise to this aggravated form of dilatation is traceable to conditions in the pylorus itself, or the walls of the stomach in its vicinity, or to conditions outside of them. As a rule it may be broadly stated that persistent dilatation in an aggravated form is always due to lesions within the stomach cavity. The causes acting from within the stomach leading to obstruction of the pylorus in the order of their frequency, according to my experience, are—(a) Cicatrisation of simple ulcers in the neighbourhood of pylorus; (b) Malignant disease attacking the pylorus; (c) Fibroid thickening of pylorus, the result of inflammatory changes; (d) Inflammatory conditions of the mucous membrane of the stomach and pylorus, leading to pyloric spasm (such is the condition found

in fatal cases of what is called the acute dilatation of alcoholics); (e) Foreign bodies—such as coins or plum stones—retained in the stomach and forming sacculated diverticula in the neighbourhood of the pylorus; (f) Pedunculated tumours growing from the wall of the stomach and falling against the pyloric opening.

The causes arising outside the pyloric walls leading to obstruction and dilatation are—(a) Pressure on the pylorus and duodenum by an enlarged organ in its vicinity, such as we find in some forms of enlargement of the liver or gall bladder; (b) Tumours in the fissure of the liver especially; (c) Pressure on pylorus of peritoneal or retro-peritoneal tumours; (d) Floating kidney; (e) Cystic disease of kidney pressing forward; (f) Kinking of duodenum or pylorus from non-yielding of gastro-hepatic ligaments, when stomach is dragged down by the weight of its own fluid contents when in a dilated condition.

If we direct our attention to the second form of dilatation, which I have alluded to as partial, and which is the form most frequently met with in all functional gastric troubles, and consider the causes that give rise to it, we find these causes for the most part associated with derangements of digestion, where from alteration in the gastric contents gases are generated, which by their continued distending action lead to dilatation of the stomach cavity; but the most frequent cause of this partial dilatation, in my experience, is an atonic condition of the muscle wall of the stomach, and as the cardiac end is the most muscular portion an atonic condition of this muscle is more likely to be followed by yielding of this particular end than towards the pyloric one, which is more fibrous in structure. This form of dilatation is consequently found in all adynamic conditions. It is present in all forms of anæmia, pernicious anæmia included, and is constantly present in chlorosis, but not where gastric ulcer is associated with that affection, as the condition of the stomach in gastric ulcer is the very opposite to that of dilatation—namely, one of irritable contraction of its muscles from the irritation produced by the ulcer and the excess of HCl present with it.^a

^a When dilatation of the cardiac end is present in association with gastric ulcer, hour-glass contraction of the stomach is usually found.

You find this form of dilatation in nearly all cases of advanced phthisis, also as a consequence of long-continued illnesses with pyrexia, such as in typhoid fever, being frequently present during the convalescent period following that affection.

You find it accompanying the exhaustion of long-continued suppuration either in bones or elsewhere, also after many of the exanthemata and after influenza. In children such form of stomach dilatation follows sub-acute gastritis or gastro-enteritis, but dilatation is rare in children except from this cause. We meet with it in that important form of degeneration of muscles characterised by fatty changes, and also in chronic alcoholism which is frequently accompanied by such changes. Acute dilatation, due to paralysis of the essential nerves of the stomach (the pneumogastrics) should be mentioned here, but it more properly belongs to the graver form of dilatation.

Having enumerated the causes that lead to both forms of dilatation I will briefly allude to the symptoms characteristic of each.

In the first form there is aggravated dilatation, and sooner or later the stomach is dislocated downwards. The symptoms of this condition are most characteristic. Prominent amongst these symptoms is vomiting. This vomiting differs in the time at which it occurs, and in its character from the vomiting that takes place in other affections of the stomach; it does not take place after a meal, nor does it come on once a day, or twice a day, but generally every other day, and frequently takes place only at night (a most characteristic symptom of dilatation), or the intervals between attacks of vomiting may be extended to days, or even to a week or longer.

In other forms of stomach affection where vomiting occurs it is usually the result of some article of diet that disagrees, or some inflammatory or irritable condition of the stomach produced by food, and the vomiting as a rule follows the ingestion of such food; such is the condition of things in gastric ulcer and acute and sub-acute gastritis. Though patients with dilated stomachs do not suffer from vomiting after food, some hours after food is taken they complain of pain, heartburn, and gaseous eructations, which are re-

peated after each meal, and which are ultimately only relieved by vomiting.

When the intervals between acts of vomiting are counted by days the stomach in my experience is usually found dilated and very much dilated.

In no other gastric affection accompanied by vomiting is the vomited matter so acid or so large in quantity as in cases of dilatation. Patients themselves will express the opinion that they vomit more than they eat or drink. The vomited matter is, as a rule, frothy, and when allowed to stand for some time bubbles will appear on the surface, due to fermentation and the evolution of gases.

If we examine it chemically, and by the aid of the microscope it will be found that the acidity is rarely due to hydrochloric acid, but to the volatile or organic fatty acids—lactic, butyric or acetic. Microscopically we find great numbers of fungi associated with fermentation—*sarcinæ* when the liquid contents are retained for a considerable period, say a number of days; *torulæ* when the intervals between the attacks of vomiting are shorter. We find also bacteria in great numbers. During normal digestion bacteria are never found, nor are they likely to exist in healthy gastric contents, more especially the hurtful organisms which are destroyed by the antiseptic action of the hydrochloric acid in the gastric secretion. In aggravated cases of dilatation this acid is found in only small quantity—not sufficient to kill off bacterial growths, which continue to grow and generate toxins.

The most salient and characteristic physical sign of dilatation is splash on succussion of the stomach. It is not easy in all cases to ascertain the presence of this peculiar splash. Mere jogging of the stomach alone in one direction or another will not always determine its presence, and especially if this manœuvre is confined to the epigastric region alone. When dislocation has taken place the entire abdominal cavity has to be searched before this symptom is elicited even though dilatation to a formidable extent is present. It is also absent in many cases, owing to the stomach being emptied by vomiting previously, and after lavage by the stomach tube, as a considerable quantity of fluid and air must be present for its production. To nothing can I better compare this

peculiar splash than the sound produced in an incompletely filled water bed by jogging or shaking it, or to the splash produced in a water tank by agitation. It has come to be known by the students of our hospital as the water-tank sound of dilated stomach.

Another constant symptom of the graver form of dilatation is obstinate constipation, the bowels often not moving without the aid of purgatives for days or even weeks at a time, and then only imperfectly, the evacuations being dry and lumpy, and lodgments in the colon being not an infrequent accompaniment. This condition always indicates a very considerable narrowing of the pylorus, through which the stomach contents are not passing, and the intestines losing the stimulus which the stomach contents afford, cease to secrete and pass themselves into an atonic condition. If with this dryness of the bowel vomiting of all stomach contents is constantly taking place a desiccation of the tissues ensues, and some authorities consider a fatal termination results from this cause more than from any other. Tetany, extending from the muscles of the abdomen to the extremities and muscles of the neck and back, often accompanies this condition, and I have seen it prove fatal. This tetany would seem to be due not so much to this desiccation as to the absorption of some toxin from the stomach contents. Another symptom associated with dilatation, and generally indicative of considerable obstruction at the pylorus, is visible contraction of the stomach seen through the abdominal wall. The contractions generally travel from left to right, and may be excited by pinching or stroking over the stomach. They are due to hypertrophy of the muscle wall of the stomach in trying to force its contents through the narrowed opening of the pylorus, such hypertrophy being similar to what occurs in the left ventricle of the heart in aortic obstruction. Cramp in the fingers is frequently complained of by patients the subjects of dilatation, and nodular growths on some of the joints of the phalanges are present in a great many cases, as pointed out by Bouchard. Coldness of the feet and hands, and redness of the nose, acne of the face and back, and attacks of urticaria are frequent symptoms. We sometimes find evidences of vaso-motor disturbances, such as sweating of the face and body, often of one side only, and accompanied

by a peculiar pungent, acid smell, probably due to the elimination of the fatty acids by the skin.

I will now direct your attention to the symptoms that are indicative of the second form of dilatation I have alluded to as that of partial dilatation. As this form of dilatation is found accompanying almost all the stomach affections known as dyspepsias, it is constantly present in that form of functional derangement known as catarrh of the stomach, an affection which may arise from ordinary cold-catching, as a patient may get a cold in the stomach as readily as in the head or throat. It is also found in the gastric catarrh associated with cirrhosis of the liver, and with valvular lesions of the heart where the liver is enlarged. Gastric catarrh, however, owes its origin more frequently to ingestion of unsuitable food or liquid, which when retained too long in the stomach (the gastric secretion being defective) undergoes fermentative changes, such, for instance, as the catarrhal dyspepsia which is so common an affection in those who live constantly on tea and uncooked starch foods.

Here not only the quantity of the liquid taken, but the character of the food, is favourable to fermentation and the formation of the fatty acids. We find as articles of diet amongst the poor bread unsuitably baked, or other badly-cooked starchy food, such as potatoes, which are very prone to undergo fermentative changes, leading to the formation of acids, especially acetic acid. Amongst the poor, too, there is a great tendency, when dyspepsia is present, to seek relief by means of alcohol in some form. The alcohol taken under these conditions is liable to contribute still more to the acetic acid fermentation, and to cause with lactic and butyric acids the acrid sensation and heartburn such patients so frequently complain of.

You will always find the minor form of dilatation present in such cases if you look for it, and the splash characteristic of it in the left epigastric and hypochondriac regions. In a former portion of my paper I alluded to the frequency with which this minor form of dilatation is met with in all atonic conditions; in some cases it would seem that an intrinsic atonic condition of the gastric muscle just as frequently results from the poisons that are absorbed into it during defective digestion, and directly paralyse its

functions. Türk has quite recently investigated the toxins of the stomach in cases of gastritis associated with dilatation, and found that the filtered contents injected into rabbits produced paralysis in an hour and a half, and in larger doses killed. A reference to his paper will be found in the *New York Medical Journal*, February 22, 1896.

Constipation in patients the subjects of the minor form of dilatation is a very frequent symptom, but not to the same extent as in the graver form, and vomiting as a rule is not present, the stomach contents ultimately finding their way into the intestine, by which they are absorbed with the toxins contained in them, and which produce the vague, nervous symptoms such patients complain of. Amongst these symptoms hypochondriasis is a common one, weariness on the slightest exertion and a disinclination for exertion. Headache, pain in the left side, and palpitation of the heart, and transient or intermitting anæmia are frequently present also. You also find symptoms referable to the lungs, throat, or bronchi in dilatation of the stomach where the contents are for some time retained, especially in the more aggravated form of the affection. I have lately had under my care in the Mater Misericordiæ Hospital a patient with dilatation, who, while undergoing some preliminary examination of his stomach contents preparatory to lavement, got a severe attack of spasmodic asthma to which he was not previously liable; he had not vomited for days previously and succussion showed the stomach dilated and filled with fermenting contents. In the middle of the night, without being exposed to cold in any way, he got an attack of asthma with considerable dyspnœa and bronchial obstruction, which persisted until his stomach was washed out, when it gradually subsided. That his attack of asthma was due to some toxin absorbed from his stomach I think there could have been no doubt. What the nature of that toxin was I am unable to say; possibly it may have been due to the fatty acids—butyric or lactic—being eliminated by the bronchial mucous membrane. They are principally eliminated by the skin, but also by the lungs, and it is possible the attack of asthma in this case may have been due to their elimination by this channel.

We know other toxins in the blood produce asthma—

uræmia and gout for instance—and we know that many of the toxins formed in the stomach affect the individual in various ways, some of them causing spasm and cramps, and others, as in Türck's experiments, causing paralysis and neuritis. The most reliable symptom indicative of the partial form of dilatation, as it is of the graver form, is splash on succussion. This splash in cases of left-sided dilatation is invariably found when the stomach contents are delayed and fermenting, and is never found in a healthy stomach, no matter what the amount or what the character of its contents. It can always be obtained by succussion of the stomach in the left epigastric region in an upward and outward direction in a line between the umbilicus and the left costal cartilages. When the stomach is dilated but empty a tympanitic note takes its place, with this difference—that the tympanitic note is heard over a large area of both the left epigastric and hypochondriac regions, and extending from here upwards to the left nipple, and outwards from this level to the mid-axillary line. Under few circumstances is a tympanitic note heard in this situation, differing from that of ordinary thoracic resonance, except in dilatation of this end of the stomach. It is consequently always as reliable of this condition as the splash sound, and both together are conclusive.

Our methods of diagnosis at the *Mater Misericordiarum* are:—If in an hour or two after a test meal splash is elicited, or splash and a tympanitic note extending to or near the nipple line, dilatation is diagnosticated. If the splash is heard at the end of five hours or longer an atonic condition of the muscle wall of the stomach is assumed to exist. To ascertain whether the dilatation is due to fermenting contents or atony alone, we siphon off the contents at different periods after the test meal and examine it chemically. If lactic acid persists for some hours after the test meal, hydrochloric acid being absent, or present in only small quantities, lactic acid fermentation is present; if it is constantly present, with hydrochloric altogether absent, cancer of the stomach or of the pylorus is usually diagnosticated.

If butyric, lactic and acetic acids are found, there is no doubt that fermentation of food contents is going on. If the solvent power of the pepsin present is feeble in its action on

proteids, or produces no solvent action on them, secretion is defective, or atrophy of gastric glands is diagnosticated. For the determination of the existence of hydrochloric acid either Toepfer's test (dimethyl-amido-azobenzol), the benzo-purpurin, and Günzburg's phloro-glucin and vanillin tests are used. For the detection of lactic acid a watery solution of perchloride of iron is used, which is a very certain test. Butyric and acetic acids are detected by their smell when the filtered gastric contents are treated by ether, which extracts them out.

The chemical test for an atonic condition of the muscle wall of the stomach (the pylorus being pervious) is the administration of salol, which is unchanged by the stomach, but splits up into its component elements phenol and salicylic acid when it reaches the intestines, the salicylic acid being secreted by the kidneys and appearing in the urine as salicyluric acid.

If this acid is not found in the urine until some hours after the administration of the salol an atonic condition of the muscle wall of the stomach is assumed to exist. For the extraction of the contents of the stomach we find the ordinary siphon india-rubber tube, such as is used for washing-out purposes, quite sufficient. When passed into the stomach and allowed to remain for a few minutes the part projecting in front of the teeth is throttled and held so until withdrawn; a drachm or two of the contents of the stomach is found in the end of the tube near its point, which is found quite sufficient for all purposes of examination. The tube and funnel which I use for both extraction and washing-out has a stop-cock fitted to it, which ensures all air being shut out in the process of extraction.

The title of my paper did not include a description of the methods of treatment in cases of dilatation, but I do not wish to dismiss the subject without a few words on that all-important point. For cases of the graver form of dilatation associated with obstruction at the pylorus, where, arising from within the stomach, a suitable pyloroplasty, or gastro-enterostomy, is the only form of treatment likely to produce a cure, or to procure amelioration of the distressing conditions present; and when contractions and cramp of the

stomach or symptoms of tetany arise, operation should be urged at once.

The only other alternative to procure temporary relief is washing out the stomach. I know of no other treatment in the graver form of dilatation which brings so much comfort to our patient, and even in the lesser form of dilatation I have no hesitation in resorting to it when catarrh of the stomach with fermentation and acidity distress the patient. It is not necessary I should describe the methods of its performance, but a few words as to the best time for doing it may not be out of place. Lavage of the stomach is always best done in the morning before food is taken, as by that time the food of the previous day, if not digested normally, is at all events liquefied sufficiently either by fermentation or by growing colonies of bacteria to prevent its blocking the tube in the process of extraction. Having ascertained the size to which the stomach is dilated, from a pint to two pints of hot water is first injected through the tube and then siphoned back, so as to thoroughly wash the cavity. Next, a pint of some alkaline solution is introduced without withdrawing the tube, and allowed to remain for a few minutes while the stomach is agitated between the fingers, and then siphoned back and the tube withdrawn.

The selection of the solution is not a matter of much importance—lime water answers very well, or a few teaspoonfuls of bicarbonate of soda, potass, or lithia dissolved in a pint of hot water, or if the breath is fœtid some boric acid, peroxide of hydrogen, or sanitas may be substituted.

Türk has lately introduced a novelty in the shape of an instrument for gastric dilatation, which he has called a *gyromele*. This instrument consists of a flexible cable, to the end of which is attached a spiral spring covered with a sponge. To determine the outlines of the dilated stomach the tube is introduced into the organ, and the apparatus set in motion. The revolving sponge can be easily palpated through the abdominal wall along the entire length of the stomach. The *gyromele* can be used as a therapeutic agent as well. In chronic catarrh of the stomach the revolutions of the sponge are extremely useful in effecting the removal of mucus from the surface of the mucous membrane, while in atonic conditions of the organ the friction thus applied to its

inner surface acts as a stimulant to the muscular tissue. Weak solutions of nitrate of silver on the sponge have been recommended as an application to the mucous membrane in this manner. Massage of the stomach is also a most important method of treatment in the atonic variety of dilatation. Electricity I have tried, but I am disappointed with it, and rely more on careful massage to effect good results.

To check fermentation I generally prescribe creasote or carbonate of guaiacol combined with bismuth, or sulphurous acid, or the hyposulphites, just as I find them to agree best; and where pain is present iodoform, carbolic acid, or ichthyol in pill combined with opium or Dover's powder.

The minor form of dilatation is generally very amenable to treatment, careful regulation of the diet being in many cases the principal treatment necessary where injudicious dietary leading to fermentation is the cause. When a certain amount of catarrh is associated with this I find the alkaline carbonates—especially the bicarbonate of soda, with nuxvomica and a vegetable bitter, taken before food—very efficacious; it has the double property of dissolving mucus and exciting a more healthy acid secretion afterwards, besides lessening the tendency to acid fermentation. The addition of bismuth to such a combination is also very comforting if there is much gastralgia or heartburn present. If after this treatment for some days splash is still elicited four or five hours after a meal, an atonic condition of the gastric muscle is probably present, and I then give, in addition, four or five drops of liquor strychninæ after each meal. I consider no other drug to compare with it when a lax and atonic condition of the stomach wall exists. Purgatives given at the same time have a most wonderful influence in emptying a full, dilated stomach; the peristalsis of the intestine excited by them seems to be communicated to the gastric wall reversely and to excite its contractions. Where catarrh is chronic and constantly leading to dilatation occasional lavage combined with the above treatment will generally effect a cure. Pepsin, though often prescribed in such cases, I have little faith in as a means of treatment. It is at best but temporising, and its administration seems to me both unscientific and useless; in my experience it often

sickens the patient and increases the dilatation present, and certainly it does not lessen the fermentation.

In cases of atrophy of the gastric glands, and of marasmus in advanced cancer of the stomach walls, when combined with hydrochloric acid it assists the patient to digest proteids, but it is not as efficacious with a mixed diet in this respect as many of the malt extracts.

A consideration of the various kinds of food suitable for the different conditions that lead to dilatation I have not touched on, and I have contented myself with calling attention to the more obvious methods of treatment I have found usually efficacious.

ART. XX.—*Beri-beri and the Diseases Confused with it.*

By SURGEON-CAPTAIN W. J. BUCHANAN, B.A., M.B.,
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THE persistent epidemic of the disease, grotesquely called beri-beri, in the Richmond Asylum, Dublin, has attracted the attention of medical men in the tropics who are familiar with it. I have, however, not yet seen any clinical account of the Richmond outbreak, nor has its origin, I think, been clearly established. Owing to a confusion of ideas, which it is the object of this article to make clear, medical men in India are often expected to be acquainted with beri-beri, though, as a matter of fact, many have never seen a case of the endemic neuritis of Pekelharing and Winkler, to which alone the name beri-beri is correctly applied.

Many years ago Malcomson, writing in Madras, described cases to which he gave the name *beri-beri* (an expression utterly unknown by any native of India). These, it is clear, had the characteristic symptoms, nervous and cardiac, which the researches of Pekelharing and Winkler have shown to be pathognomonic of the disease. If these are absent, the disease cannot be beri-beri. Unfortunately other cases were described of a cachexia in which œdema of the feet, ankles, and legs, and dropsy of the serous cavities were present, and these prominent symptoms and anæmia came to be regarded as characteristic of beri-beri. This was before

Pekelharing's investigation. Then came the discovery of the *Ankylostoma duodenale* parasite, and it was thought that here was the *vera causa* of beri-beri, more especially as a cachexia in Ceylon (to which the name beri-beri had become attached) was shown by Kynsey to be due to this parasite, and at that time, owing to the discovery of the filaria by the late Surgeon-Major Lewis, and of its history by Manson, it was thought that entozoa were to explain all tropical pathology. The name beri-beri spread to Assam, where the ankylostoma was also found, and it was indiscriminately applied to many cases of kala azar and ankylostomiasis. Unfortunately the name beri-beri persisted, even after the publication of Pekelharing's monograph showing what true beri-beri is.

To turn now to kala azar in Assam. This disease has prevailed for thirty years in the southern portion of that province. It was first recognised in the Gazo hills, and has slowly and surely spread up along the alluvial banks of the Bhramaputra River, devastating and depopulating (literally) as it advanced. In 1889, Surgeon-Major Giles, F.R.C.S. (Eng.), was ordered to investigate this veritable pestilence. He discovered that the parasite (ankylostoma) was present in many of these cases, and concluded that kala azar was an ankylostomiasis, occurring in malarial stricken people. This view seemed to explain much, but it was never accepted by medical men in Assam, and Surgeon-Major Dobson, Civil Surgeon of Dhubri (at which place all coolies imported for labour on the tea-gardens of Assam are collected and medically examined), soon showed that this parasite was present in seventy-seven per cent. of healthy people, Assamese and coolies, recruited from all parts of Bengal and the N.W. Provinces. If its presence in such a percentage was compatible with good health, the worm obviously could not be the cause of a destructive disease like kala azar. Again, in 1896, the Government of India sent up Surgeon-Captain L. Rogers, M.B. (Lond.), F.R.C.S. (Eng.), to make a new investigation and report. This Report is just published, and must be considered a valuable contribution to malarial pathology and history. His opinion is that the old Assam view is correct in part, in that kala azar is

only an intensely severe form of malarial cachexia, and that the parasite ankylostoma has absolutely no share in its causation—in fact, it complicates cases of kala azar only to the extent of six or seven per cent., just as it and many other intestinal worms complicate every disease in Assam; while he shows that the symptoms of kala azar (anæmia, dropsy, œdema of feet and legs, &c., &c.) are absolutely identical with ordinary malarial cachexia, as seen and known in every malarious country. Moreover he has shown that the blood changes (hæmoglobin, white cells, specific gravity, &c.) are exactly like those in malarial cachexia, and are absolutely distinct from those in pure ankylostomiasis; also in every case of kala azar the ordinary well-known plasmodium of malaria is to be found, and no other organism could be discovered in cultures of blood from many cases. He has, therefore, shown that kala azar is distinct from ankylostomiasis, and is only an epidemic communicable form of malarial fever and its resultant cachexia. This at once raised the point of the well-known contagiousness of kala azar. This is a popular belief, which Dr. Rogers' report has established as a fact. It at first sight, however, starts the presumption that kala azar cannot be a purely malarial disease, as we do not usually look upon malarial fevers as being in any way communicable from the sick to the healthy. This fact, however, Dr. Rogers faces boldly. He traces the origin of kala azar to the intense malarial epidemic which prevailed in Lower Bengal from 1863 to 1875, which was almost certainly malarial, and which was shown at the time to be infectious to the same extent and in the same way as Dr. Rogers shows kala azar to certainly be.

He also gives an account of the great epidemic of malarial fever in the Mauritius and Réunion Islands in 1865-6, which had been free of malarial fevers till they were introduced by Indian coolies from affected India. Therefore any arguments against kala azar being an infectious or communicable form of malaria apply equally to the historical epidemics of Lower Bengal and Mauritius in the sixties. Laboratory experiments on the intensification of germs cannot help us, as no one has ever succeeded in cultivating or even seeing the *Plasmodium malariae* outside the blood corpuscles. Analogies in other

diseases are, however, in favour of this view—*e.g.*, *pestis minor* is said to be a mild non-infectious form of plague, and there is good reason to believe that an infectious form of pneumonia exists at times on the north-west frontier of India and in Baluchistan. However, we cannot linger further on this part of our subject. Accepting, therefore, the view that kala azar is distinct from ankylostomiasis, we must note that true ankylostomiasis does also exist in *Upper* Assam, but not in the epidemic and contagious way kala azar exists in the lower parts of that province.

As regards ankylostomiasis, it has been proved that the worm is found in apparently healthy people in many parts of Bengal, North-West Provinces, Malabar and Madras. Its ravages in Ceylon are known from the writings of Kynsey and Hayman Thornhill. In China, Java, Borneo, Brazil, Egypt, at the making of the San Gothard tunnel, and in the West Indies, ankylostomiasis certainly prevailed to such an extent that Dr. Sandwith has described it as “sapping the lives” of the Egyptian peasantry. It is strange, therefore, that it is not more destructive in Assam. Unless, however, from 500 to 1,000 parasites are present for several months in the intestine little or no harm apparently results to the host, but that this parasite is one of the veritable scourges of humanity no one acquainted with its history can deny.

As regards the prevalence of endemic neuritis (*beri-beri*) in India, the confusion which existed has made one sceptical as to the accuracy of cases recorded in statistical returns under that heading. It is probable, however, that true *beri-beri* is far from being so prevalent in India as is commonly supposed. In and around Calcutta it is found chiefly among Chinese carpenters; in Bengal generally it is very rare; in the North-West Provinces and the Punjâb I have never heard of a case. In Madras cases under that name are mentioned in returns; and others, probably true neuritis, have been reported in Burmah (where there is a strong Chinese element in the population). Other cases are to be found among the Lascar sailors of the Indian seaports, and it is this class that furnish the cases of *beri-beri* usually seen in the hospitals of London and Glasgow. Has a case among Lascars or Chinamen ever been met with in the port of Dublin?

One more point about beri-beri, for it has been a fertile source of confusion—that is, that anæmia is neither a prominent nor a necessary symptom of endemic neuritis.

A word on the differential diagnosis. In beri-beri (endemic neuritis) we must look for the characteristic cardiac and nerve symptoms and the reaction of degeneration; in ankylostomiasis (parasitic anæmia) we must search for the worm after the exhibition of thymol, or by microscopic examination of a portion of the excreta for the ova of the parasite. In kala azar (epidemic malarial fever), which is confined to Assam, we have the history of the sure and slow spread, and evidence of its infectiveness. An individual case, apart from its history, is not to be distinguished from ordinary malarial cachexia, just as in the commencement of an influenza outbreak any individual case may be either simple bronchitis or real influenza. It must also be remembered that the co-existence of malarial cachexia with either beri-beri or ankylostomiasis, as very frequently happens in tropical countries, renders an exact diagnosis sometimes difficult, and it is this fact which, in countries where malaria is very common, has stood so much in the way of clear ideas on the above diseases. To what an extent this confusion has existed the article on beri-beri in Quain's Dictionary of Medicine is proof.

ART. XX.—*What is the Best Method of Treating Syphilis?*

By J. M'NAMARA, M.D., B.Ch., B.A.O., R.U.I., Kensington, London, W.

IN the following paper I endeavour to give an answer to the question: What is the best method of treating syphilis? The subject is common-place. But when we consider the evils which syphilis is causing in the world, when we consider the large proportion of the manhood and even of the womanhood and childhood of our great cities which is tainted by this fell disease, it will be admitted that the subject is one of the highest importance.

Some of the ideas contained in the first part of this essay I have already published; but a large experience has since so convinced me of their truth and value that I make no apology for prefixing them to the present paper.

In the first place I am taking it for granted that in the absence of the as yet undiscovered but inevitable antitoxin, mercury in some form or other is the proper drug to be administered in primary and secondary syphilis.

The question then arises, What is the best preparation of mercury to be given in these circumstances? Since each of the numerous preparations of mercury is believed to be of more or less benefit in syphilis, and since the only constant factor in these various preparations is the metal itself, it follows that it is the metal itself which is the curative agent, and not any of the substances with which it is combined.

This fact suggests the answer that the best preparations of mercury are those which in safe, unirritating doses contain the largest quantity of the metal; for if mercury be the enemy of the syphilitic virus it is inconceivable that the very small quantity of the metal contained in a safe dose of a preparation like corrosive sublimate can be as efficient as the comparatively large quantity contained in an ordinary dose of a preparation like the hydrarg. cum cretâ.

But the advantage of preparations containing a large quantity of the metal is not merely a matter of theory, but is proved by the test of experience; for one of the most convincing proofs of the value of mercury in syphilis is its rapid and striking influence over infantile syphilis. Now, in this form of syphilis the hydrarg. cum cretâ is the preparation most generally given, and its rapid effect is, I contend, due to the large quantity of the metal circulating in the small body of the infant. Moreover, I have seen patients progress but slowly, or not at all, while taking corrosive sublimate, and who improved rapidly when put on a course of mercury with chalk. Again, I have seen three cases of severe syphilitic iritis develop while patients were taking corrosive sublimate, and I have seen again and again grave tertiary lesions follow even a prolonged course of preparations containing a small quantity of the metal. But I have never seen such after a prolonged course of preparations like mercury with chalk or blue pill.

Corrosive sublimate, which is so frequently given in syphilis, is, I believe, the least efficient form in which to administer mercury internally, for not only does it contain in a safe dose an exceedingly small quantity of the metal, but even

this small quantity frequently fails to reach the patient, for when given, as it frequently is, in solution in ordinary water containing lime-salts, it is liable to decompose, the mercury becoming precipitated at the sides or bottom of the containing vessel.

Theoretical considerations, then, as well as practical experience, point to preparations containing a large quantity of the metal as the best for administration in syphilis. And of these preparations the hydrarg. cum cretâ is at once the least irritating and the most convenient. Blue pill is also a good preparation.

But while I hold that it is of advantage to have a large quantity of mercury circulating through the tissues of the patient, the quantity must not be so large as to produce salivation, purgation, or any other injurious effects; for when the struggling tissues are injured by mercury or by any other cause, then the enemy triumphs, and the worst forms of syphilis may ensue.

It will be seen that the view which I am advocating as to the best method of treating primary and secondary syphilis—namely, *maximal doses, short of mercurialism, of preparations of mercury containing large quantities of the metal*—is a compromise between the old school, which did harm with excessive doses, and a modern school which believes in minimal doses.

I may here, perhaps, mention that my experience gives me reason to believe that milk or other albuminous food, given at the same times as the mercury, interferes with its action. This I would explain by assuming that albuminate of mercury is formed before the mercury gets into the blood or tissues, and that consequently the mercury is no longer free to unite with and destroy the syphilitic virus or its toxin.

The treatment of syphilis should be carried out for a prolonged period. For mild cases, in young vigorous adults, for *not less* than six or seven months; and for more severe cases, or in patients above 38 or 40, it would be well to prolong it for at least a year. In most cases the maximal doses may, with advantage, be lessened after the first few months. The administration of mercury should, of course, be combined with the avoidance of alcoholic excesses and of everything calculated to lower the vitality of the patient.

In tertiary syphilis the value of large doses of iodide of potassium is undoubted and needs no discussion. But on the question whether mercury should also be given in addition to the iodide of potassium, the profession is by no means unanimous.

I hold that mercury should also be given, and for the following reasons:—In the first place, although it is of course impossible to measure the exact amount of benefit derived from giving mercury in addition to the iodide, nevertheless I have a distinct impression that when mercury is added the cure is more rapid and more permanent, and there are many great authorities like the late Dr. Bristowe who have the same impression; in the second place because in all probability the syphilitic virus is present in the tertiary stage as well as in the earlier stages, although localised to the seat of lesion.

This opinion that the virus of syphilis is present in tertiary lesions I found on the fact that we know no other disease where there is a pathological process at all comparable to the lesions of tertiary syphilis, and where the virus of the disease is not also present. Take, for instance, the “infective granulomata,” no one pretends that the organisms which cause leprosy, farcy, actinomycosis or tubercle, are not present at least in spore form in the late manifestations of these diseases. It may, perhaps, be objected that no specific organism, or organism suspected of being specific, has been found in the late lesions of syphilis. But this does not prove its absence. In the caseous masses of old tubercle the bacillus tuberculosis is seldom if ever found; yet that the organism is present either in the form of spores, or in some old-age form unrecognisable by present methods, is proved by inoculation experiments.

As illustrating how organisms may sometimes get converted into forms not easily recognised, I may mention Pfeiffer’s experiments, showing the transformation of the cholera vibrios into oval-shaped bodies.

Again, it may be objected that tertiary syphilis is not infective. This is an assumption of which there is no proof. If the virus be localised to the lesion and there be no ulceration, and especially if it be only the toxin of the virus which

is present, tertiary syphilis cannot well be infective, and certainly cannot be so infective as secondary syphilis, where every drop of blood and probably every particle of living tissue contains the poison. But an ulcerating tertiary lesion may very well be infective, and probably is so, if we may judge from the analogy of leprosy, where, in the words of the late South African Commission, "ulceration is a measure of the danger of contagion."

But even should tertiary syphilis be subsequently proved not to be infective, this would only point to the absence of the infective organism, and would not exclude the presence of its toxin; and as we do not know whether the curative effect of mercury is due to its action on the living germ or on its toxin, mercury is therefore indicated in tertiary syphilis, whether tertiary syphilis is infective or not.

THE "LARYNGOSCOPE."

WE understand that Messrs. John Wright and Co., of Bristol, have undertaken to publish a European edition of this periodical, commencing with the new year. It will be issued simultaneously with the American edition. The "Laryngoscope" is now the official organ of the laryngological section of the New York Academy of Medicine, of the southern section of the American Laryngological Rhinological and Otological Society, and of the Western Otological Laryngological and Rhinological Association. It is a monthly journal devoted to diseases of the nose, throat, and ear, published in extra large octavo sheets, 64 pages each month. It costs only a shilling a month, or ten shillings per annum. The new publishers, Messrs. Wright and Co., will be glad to receive names of intending subscribers, either at their Bristol address or through Messrs. Simpkin, Marshall, Hamilton, Kent and Co., of London.

BEEF TEA.

THE popularity of the oldest established of the beef tea preparations is strikingly exemplified by the fact that the Liebig Company's sales of their J. v. Liebig Extract during October have beaten all records since the formation of the Company more than thirty years ago; and we understand that this is not due to any unusual pushing in the way of trade bonuses, but simply in the ordinary course of business.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

RECENT WORKS ON CLINICAL MEDICINE.

- I. *The Student's Guide to Medical Diagnosis.* By SAMUEL FENWICK, M.D., F.R.C.P., Consulting Physician to the London Hospital; and W. SOLTAU FENWICK, M.D., Physician to the London Temperance Hospital. Eighth Edition. London: J. & A. Churchill. 1897. Pp. 468.
- II. *Clinical Methods: a Guide to the Practical Study of Medicine.* By ROBERT HUTCHISON, M.D., Demonstrator in Physiology, London Hospital Medical College; and HARRY RAINY, F.R.C.P. Ed., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh. With 137 Illustrations, and 8 Coloured Plates. London: Cassell & Co. 1897. Crown 8vo. Pp. 552.

THESE are both excellent books; they treat of similar subjects, which, however, they approach from diverse points of view. They are intended for the same class of readers, and therefore we have grouped them together for reviewing purposes.

I. To take first the older of the two works, reckoning from the date of its first edition: Dr. Fenwick's Guide was first published in 1869, and has been found so useful that seven editions having been exhausted, the eighth has just been published. It is, however, not so much a new edition as a new work. The changes and advances in many of the methods of clinical investigation have, of recent years, been so extensive and important that nothing less than a re-writing of the book was needed, and we have now much pleasure in bearing witness to the thoroughly modern character of the work. It may be looked upon as a new book. The import-

ance of pathology in modern medicine is fully recognised, and disease is treated from an anatomical and pathological standpoint.

The book is written to help the case-taking student to make a diagnosis of what is amiss with his patients, and to enable him to gain a clear grasp of the nature of their diseases. Thus, in each section—heart, lungs, stomach, &c.—a few characteristic features of each disease are given, in order to establish the diagnosis, and then its various phenomena are described and explained at greater length.

Thus, in the section on the lungs—first, the pathological nature of the various lung diseases is explained, the modes of physical examination are described, and the normal and abnormal phenomena to be met with—dulness and resonance, râles and rhonchi, &c.—are fully set forth. Then the acute diseases of the lungs are enumerated, and are first divided into two classes—those in which the student finds dulness, and those in which this sign is absent. If dulness exists, the disease is either pneumonia, pleural effusion, or hydropneumothorax. The distinguishing features of each of these are then given—first in a few words, and then at greater length—a description of the disease just long enough to contain all the facts necessary for a beginner to know being appended to the diagnostic points. Then the acute diseases without dulness are treated of.

In this way all the systems in the body are taken up in turn. Many tabular statements of diagnostic points are introduced.

There are a good many excellent diagrams, and some photographs of diseased tissues to which we cannot give much praise. We wish the authors had confined themselves to diagrams. We are convinced that a good diagram is far more instructive than any photograph.

We note that a half-inch lens is said to be powerful enough to detect tubercle bacilli in sputum. We would not advise a student to trust to any such lens. There are two absurdly bad woodcuts of the microscopical appearances of inflamed kidneys. In testing urine for albumen by means of boiling we are told to acidify with 10 or 15 drops of nitric acid before boiling—a most undesirable proceeding, as being liable to

create acid albumen not coagulable by heat. The chapter on Skin Diseases is poor, and likely to be of little use. But these are trifling faults after all.

We have formed a very high opinion of this book. We warmly recommend it to all students commencing clinical work. It is difficult for a beginner to read Taylor or Osler, or any of the standard works on medicine, at an early period of his student life; and without a certain amount of reading he cannot do his case-taking intelligently and well. We strongly advise him to provide himself with Dr. Fenwick's Guide, and to read it day by day in connection with his hospital work.

II. Drs. Hutchison and Rainy's book approaches its subject from quite a different standpoint, and is, in the main, a description of physical signs and of methods of making an examination of the patient. And this it does admirably well. Going through the various systems and organs of the body, we find—first, a full description of their normal characters, as evidenced by physical examination, and then a particularly complete account of all morbid phenomena connected therewith.

Take, for example, Chapter IV., on the Circulatory System. We have, first, an account of the topographical anatomy of the heart; then inspection, palpation, percussion, and auscultation of the heart are described in a most complete manner—this section occupying 58 pages, and being illustrated with 25 diagrams. Next, the pulse, and the use of the sphygmograph are thoroughly discussed. Lastly, the clinical examination of the blood is systematically gone through; the instruments devised for these purposes are illustrated and explained; and the modes of fixing and staining the blood are carefully described. There is a coloured plate illustrating normal and abnormal blood.

The other systems of the body are equally well and fully described. The authors do not confine themselves to the principal viscera, but include the eye, ear, nose, and larynx in the scope of their volume, and add a chapter on Bacteriology.

We warmly recommend Drs. Hutchison and Rainy's

book. The student or practitioner will find here all that he needs to know about clinical methods of examination and the significance of the phenomena observed.

Heart Disease: with special reference to Prognosis and Treatment. By SIR WILLIAM H. BROADBENT, Bart., M.D. London, F.R.S., F.R.C.P.; Physician in Ordinary to H.R.H. the Prince of Wales; Consulting Physician to St. Mary's Hospital and the London Fever Hospital; late President of Clinical, Medical, Neurological, and Harveian Societies; and JOHN F. H. BROADBENT, M.A., M.D. (Oxon.), M.R.C.P. London: Baillière, Tindall & Cox. 1897. 8vo. Pp. 331.

THIS work is, for the most part, a reproduction of lectures on "Prognosis in Valvular Disease of the Heart," delivered before the Harveian Society in 1884, and of the Lumleian Lectures on "Prognosis in Structural Diseases of the Heart," delivered before the Royal College of Physicians of London in 1891, by Sir William Broadbent. In the Preface Sir William tells us that the prognosis of heart disease had already engaged his attention when he was house-physician under the late Dr. Sibson at St. Mary's Hospital, and that his first paper on the subject was read before the Harveian Society in 1866.

The subject of treatment has been engrafted upon the lectures on prognosis, and it is here that the joint authorship of Dr. John Broadbent makes itself felt, and is duly acknowledged by his father. "For this, and for the rearrangement rendered necessary by it, I am indebted to my son, Dr. John Broadbent, without whose efficient assistance and co-operation the task of preparing this book could not have been accomplished."

The opening chapter describes the relations of the heart to the chest walls, and contains a brief but satisfactory account of the methods of physical examination to be followed in investigating diseases of the heart and its valves—namely, inspection, palpation, percussion, and auscultation. The first portion of this chapter, dealing with the position and relations of the heart, is taken mainly from the

works of the late Dr. Francis Sibson, of St. Mary's Hospital. Readers will please correct (on page 24) a printer's error of some importance, although obvious, to which the publishers have called our attention. "Reduplication of the second sound is not uncommon, and is due to a synchronous closure of the aortic and pulmonic semilunar valves." Of course "a synchronous" in this sentence should read: "asynchronous." On the same page (24) the diastolic murmur of aortic regurgitation or incompetence is described as being "usually blowing in character." Of all endocardial sounds this diastolic murmur has always struck us as possessing acoustic properties suggestive of its origin in a reflux of fluid. It is a *backwash* murmur, which, to a far greater extent than any other murmur developed inside the heart, conveys the impression that a movement of fluid is undoubtedly its cause. Other murmurs may be variously described as "soft," "blowing," "musical," "harsh," "rasping," and so on, but the diastolic murmur of aortic insufficiency may be called "swashing" or "splashing," in so far as these words represent the sound made by the backward wash of the blood into the left ventricle from the aorta.

In discussing valvular disease in general, in Chapter II., Sir William Broadbent dissents from the order of relative frequency of the several valvular lesions laid down by Walshe. According to Sir William's experience the following should be the order of frequency—mitral regurgitation, mitral constriction, aortic regurgitation, aortic stenosis. Of the combination of two or more lesions, mitral incompetence and stenosis, aortic and mitral regurgitation, aortic incompetence and stenosis, would occupy the first three places. By far the commonest lesion of the valves of the right ventricle is tricuspid incompetence, occurring not as a primary but as a secondary lesion—secondary either to severe valvular disease of the left ventricle, or to lung disease, such as chronic bronchitis, which gives rise to obstruction to the flow of blood through the pulmonary circulation. Other valvular lesions of the right ventricle are comparatively rare, but Sir William would place tricuspid stenosis, which may be associated with mitral stenosis, before pulmonary constriction or regurgitation.

The author's remarks on the information which may be gathered from the pulse as to the nature and extent of a valvular lesion are sound and practical. We are particularly glad to observe that he holds that in all these three forms of valvular lesion—namely, aortic stenosis, aortic incompetence, and mitral stenosis, the pulse is regular till the heart begins to break down. We have often adduced the comparative regularity of the pulse in both volume and rhythm as a diagnostic between mitral stenosis and mitral regurgitation. A sphygmographic tracing, reproduced on page 36, entirely confirms this observation.

Having explained the occurrence of hypertrophy and dilatation of the heart in the different forms of valvular disease, the author proceeds to consider the exact conditions which determine the effusion of serum into the connective tissue in heart disease (cardiac dropsy). He believes that clinical experience is in accord with the view that dropsy in heart disease is the result of obstruction to the return of venous blood to the right side of the heart (page 58). He points out that mitral narrowing is not at all so liable to be followed by general dropsy as insufficiency, the probable explanation being that the diminished output from the left ventricle in stenosis of the mitral valve does not allow of sufficient pressure in the capillaries to give rise to effusion of serum. For a similar reason dropsy is rare in fatty degeneration of the heart. The *vis a tergo* in the arterial circulation, which is necessary for the production of pressure in the capillaries and effusion through their walls, is lacking.

Sir William's views on prognosis are such as one would expect from a man of much common sense, a ripe experience, and a sound judgment. As regards sudden death, he still holds the opinion expressed before the Harveian Society in 1866, that it is "a contingency which may almost be left out of consideration in valvular disease, except in aortic regurgitation" (page 70). At the end of Chapter VII. a series of six different conditions is given in which a prognosis may have to be made in valvular disease. In each case the author discusses the question of prognosis with much ingenuity and acumen.

Chapter VIII., on "Treatment," is excellent reading. In

it the Oertel and Schott methods are described. The paragraph on "Stimulants" is well worth quoting in full—"Strict moderation must be observed in the matter of alcoholic drinks; in comparatively few cases are they necessary, and if taken they should be taken only as part of a substantial meal. Their effects as excitants of the heart may, to some extent, be neutralised by the relaxation of the peripheral vessels which they induce, but their general tendency is to interfere with due metabolism and elimination, and to bring about degeneration of structure" (page 98).

The authors' observations upon digitalis at the beginning of Chapter IX. carry with them conviction. "In most cases," they say, "it will be advisable to give a mercurial purge before its administration, and to repeat this from time to time. In cases where there is high arterial tension, the mercurial purgative is especially important, and it may be well to give with the digitalis spiritus ætheris nitrosi or some vaso-dilator to counteract in some measure the tonic effects of the digitalis on the arterioles and capillaries" (page 113).

In the same chapter the effects of digitalis in each of the principal valvular lesions are discussed with conspicuous ability and conciseness. The following four chapters are devoted to a full consideration of the individual valvular lesions—aortic stenosis (Chapter X.), aortic regurgitation (Chapter XI.), mitral incompetence (Chapter XII.), and mitral stenosis (Chapter XIII.). Then comes a short account, in Chapter XIV., of valvular disease of the right side of the heart.

The remaining topics discussed are—in sequence—congenital malformations of the heart and its valves, adherent pericardium, structural diseases of the cardiac walls leading to hypertrophy or dilatation, structural disease of the right ventricle, fatty degeneration, which is carefully to be distinguished from fatty infiltration of obesity; angina pectoris, functional affections (so-called) of the heart—namely, pain in the præcordial region, palpitation, whether persistent (tachycardia) or temporary and intermittent, and intermittent and irregular action.

An appendix contains a useful note on the preparation of

the baths, and on the movements practised, in the Schott treatment of heart disease.

The "setting" of this book is all that could be desired. Paper, type, and language are unexceptionable. We have met with scarcely any misprints or mis-spellings. "Morbus cœruleus," described at page 215, should be "Morbus cæruleus." "Asynchronous" (page 24) has already been corrected.

The work is one which adequately represents our existing knowledge of heart disease. It deserves and possesses our unreserved commendation.

Influenza, with Special Reference to some Peculiar Symptoms.

By WILLIAM GRAY, M.D., C.M. Ed. London: H. K. Lewis. 1897. Pp. 71.

THIS work contains the careful observations and conclusions derived from several epidemics of influenza. The author approaches the subject in a systematic manner, beginning with the history, nomenclature, &c., of the disease. And here we may call the writer's attention to a curious mistake his printer has made. Among the synonyms, "Tuss's Epidemic" appears in place of "Tussis Epidemica."

With regard to that disputed point—the mode of spread of the disease—the author has no doubt it spreads from person to person, the incubation period varying from fifteen hours to three days. The symptoms are very fully described, and illustrated with the notes of many cases. Dr. Gray has fairly often met with a scarlatiniform rash, differing from that of scarlatina in that the rash comes out simultaneously on all parts of the body; there is no sore throat; and the temperature does not exceed 101°. In cases where some slight cutaneous abrasion had occurred he not unfrequently met with a vesicular eruption—sometimes confined to the neighbourhood of the injury, sometimes generalised. Another symptom noticed was the tendency to uterine hæmorrhage; also the liability of influenza to attack a woman soon after her confinement. "It would be going too far to say that parturition was one of the predisposing causes of influenza, but undoubtedly there is a relationship between the two

conditions that is fairly constant and definite." In the case of women who have had a previous attack of influenza, the attack usually comes on two and a half days after the date of confinement; while with those who have never before suffered, the attack begins five days after parturition. Dr. Gray records cases from a large series of examples of this *post-partum* form of influenza.

With regard to medicinal treatment, Dr. Gray prefers acetate of potassium and phenacetin—10 to 15 grains of the former and 7 grains of the latter, every three or four hours—to any other drug or drugs he has tried.

Rheumatism and its Treatment by the Use of the Percussopunctator. By J. BRINDLEY JAMES, M.R.C.S., L.R.C.P.I. Second Edition. London: The Rebman Publishing Co., Ltd. 1897. Pp. 39.

THIS little book is, in some ways, an example of how a book ought *not* to be written. Dr. James describes his "percussopunctator," which is a short rod, from one end of which a number of needles can be protruded to a greater or lesser distance; it is so arranged that electricity can, if desired, be passed through them. He also mentions a number of cases in which he has used it with astounding results, emphasised by Dr. James with a liberal use of italics. But what we chiefly want to know he tells us nothing about; he gives us no hint to what depth he punctures his patients—does he introduce the needles only through the skin, or does he pierce the muscles also? Does he puncture in several places or only in one? Above all, why does he call his instrument a *percussopunctator*? Does he employ a mallet to drive it into the patient? To all these questions the book before us gives no answer. We hope that Dr. James may soon be induced to publish a third edition wherein our ignorance may be removed. We are not disposed to find any fault with the method recommended, as we have long known that puncture is often an efficient means of relieving pain; but we think, when an author writes advocating a special treatment, he should give all details of it.

In Chapter V. a new treatment of sciatica and lumbago is

advocated—viz., by the injection into the painful part of from ten to thirty minims of sulphuric ether. The results are said to be surprising, which we can well believe.

The last two chapters are on neurosis in modern life. The world, Dr. James says, is going from bad to worse. "In Europe the crimes of educated men (forgery, poisoning, &c.) hold a larger proportion to coarser forms of crime than of yore. Uneducated anarchists could not have devised murderous explosive engines. It is plain that modern brain-impairment has warped moral perceptions. Disavowal of all social obligations, cynically avowed disbelief in a Deity, disgracing as they do our modern literature, further prove modern neurosis to be supremely epidemic for the nonce." All this the author cures with his percusso-punctator.

Psilosis, or Sprue: its Nature and Treatment; with Observations on Various Forms of Diarrhœa acquired in the Tropics. By GEORGE THIN, M.D. Second and Enlarged Edition. London: J. & A. Churchill. 1897. Pp. 270.

PSILOSIS (*ψιλός*, *bare*) is the name suggested by Dr. Thin for an affection known already by several more or less cumbrous titles, such as *Gastro-enteritis aphthosa Indica*, and which by the Dutch in the East Indies is called "sprue." The disease seems to be characterised by a tendency towards loss of epithelium and consequent superficial inflammation in various parts of the alimentary canal, especially in the mouth, œsophagus, and small intestine. The symptoms are due to these anatomical changes. Thus, in the mouth we find the patients affected with this disease complaining of tenderness and soreness of the mucous membrane, especially when he tries to swallow anything hot. A herpetic rash may break out at the beginning, and later on the tongue may become red and bare, with deep cracks. Dr. Thin mentions several cases in which patients suffering from this disease consulted eminent physicians in London, by whom, in spite of the patients' denial of the possibility of such a thing, a confident diagnosis of syphilitic disease of the tongue was made, needless to say to the disadvantage of both patient and physician. It, therefore, follows that some knowledge

of this disease is advisable even in these countries. Three excellent coloured plates elucidate the morbid appearances of the tongue and mouth. This semi-raw condition may extend to the œsophagus, causing pain on swallowing.

In the small intestine, and especially in its lower part, similar changes take place, the mucosa being more or less destroyed, while in more chronic cases some thickening of the sub-mucosa is found. The result of this is diarrhœa—the most marked symptom of the disease. This diarrhœa is painless, and is most apt to occur during the morning hours. The stools are pale, unformed, and frothy, and the duration of the diarrhœa is indefinite.

Dr. Thin has had in his practice two fatal cases, in which careful *post-mortem* examinations were made; the morbid anatomy is very carefully explained, and a number of woodcuts show the nature of the microscopic lesions present. Dr. Thin, however, does not content himself with an account of his own cases, but refers very fully to the literature of the pathology of psilosis.

When these symptoms have lasted some time the nutrition becomes profoundly affected; anæmia and emaciation ensue; mental symptoms—depression or excitement—are common; and the disease may ultimately prove fatal, or may persist for years.

Happily, however, treatment is usually successful. It may be summed up in one word—milk. Dr. Thin prefers to give it undiluted and unboiled. He advises that the quantity ordered should be taken between 7 a.m. and 10 p.m., half a pint being slowly drunk at a time. The intervals between the half pints will depend on the amount to be taken—thus, if five pints are to be taken, the half pint is swallowed every hour and a half; if seven pints, every hour; and so on. Sometimes patients can take the milk better when it is aerated in a seltzogene; sometimes when such a bulk of fluid cannot be digested the same nutriment can be given in lesser bulk by evaporating the milk to one half. Full directions are given for the preparation of milk by each of these methods. As regards the needed quantity of milk he begins with three or four pints a day, and increases the quantity gradually. On five pints and under, weight is generally lost. During

the treatment in all severe cases the patient is kept in bed, and the abdomen is kept covered with cotton wool; great care must be taken to avoid chills. Exclusive milk diet should be continued till the motions have been solid for from five to six weeks; then a little bread is allowed, and the dietary gradually enlarged. Relapses are very common, so that the greatest caution is needed.

Full notes of twenty cases are appended, from the perusal of which many details as to treatment, &c., may be learned.

There is one point on which we do not find Dr. Thin very intelligible—namely, what extension he gives to the name Psilosis. Sometimes he confines it to the disease whose leading features, as given by Dr. Thin, we have briefly recapitulated. Elsewhere he extends the name to the diarrhœa alba, or tropical diarrhœa of Indian physicians, which he regards as a quite different disease. To differentiate two diseases and then to give them the same name seems inadvisable.

Dr. Thin's book is well written, and gives an admirably clear account of the disease it treats of. It is written from the standpoint of a man who has considerable practical experience of the matters he mentions, and will be found useful by all those who come in contact with patients who have contracted diarrhœa in tropical countries.

Localization of Headache and Sick Headache. By H. BENDELACK HEWETSON, F.L.S. Pictorially illustrated. London: Simpkin, Marshall & Co., and Leeds: Goodall & Suddick. 1897. Pp. 140.

THE book, which is very well got up, is dedicated to Thomas Clifford Allbutt, M.D. In his preface the author states that it has been his intention in this monograph to show that a large number of headaches, accompanied by nausea or actual vomiting, with vertigo and great prostration, which come under the head of sick headache in ordinary terms, are simply a series of neurotic disturbances, and are themselves symptoms of some form of ophthalmic disorder, usually associated with astigmatism.

It is well known that ordinary sick headache is present

occasionally in persons who have no defect in their vision; but from his experience he is inclined to suggest that defective vision is by far the most frequent cause of this distressing ailment, and that in the majority of cases it will be found that a complete investigation of the optical state of both eyes, under the influence of atropin, will show that glasses are required.

Out of 13 cases of sick headache which he reports as being cured by the systematic use of glasses, 12 were astigmatic.

Chapter I. concerns itself with the relation between sick headaches and defective sight, chiefly astigmatic, and their pathology and treatment by glasses.

Chapter II. deals with the subject of general neurosis having an ophthalmic origin.

Chapter III. is an attempt to map out the regions of pain in the head, indicative of each variety of cause; then follow fifteen diagrams illustrating pains in the head arising from defects of the eyes only. Five diagrams showing pain in the head and about the eyes, arising from the combined irritation of defective eyes and carious teeth; six diagrams showing the connection between disorders of the naso-pharynx and frontal sinus, and various head-pains; and two diagrams showing pains arising from, or reflected to, the ears.

A Manual of Gynæcology. By D. BERRY HART, M.D., and FREELAND BARBOUR, M.D. Fifth Edition. Edinburgh and London: W. & A. K. Johnston. 1897. Demy 8vo. Pp. 743.

HART AND BARBOUR'S *Gynæcology* has, since its publication in 1882, held a foremost place amongst works of its kind. At one time, indeed, it may be said to have occupied an unrivalled position amongst British gynæcologies. Now, however, this enviable position is contested by a formidable list of excellent publications.

It is, therefore, of interest to observe in what manner this, the present, edition may be said to equal or rival its contemporaries.

The introductory chapters—those dealing with anatomy—are really the most distinctive features of the book, and of themselves suffice to make the work one of considerable value.

Dr. Hart, who has written much on pelvic anatomy, relies on his now well-known frozen sections to demonstrate the accuracy of his teaching, and these, no doubt, are in the main correct; but until we are informed as to whether these sections are typical of a number of subjects examined, and not merely all obtained from one and the same body, we can by no means accept them as conclusive evidence of anatomical accuracy.

It is much to be regretted that the description of the nervous supply to the uterus cannot be said to be any more complete than that afforded in other gynecological manuals.

A good feature in the book is the excellent index of authorities, which, placed at the head of each chapter, is calculated to enormously facilitate the labours of those desirous of more fully studying any individual section.

The description afforded of the methods by which the physical examination is performed compares very favourably with other works. Schroeder's chair and the method of bimanual examination receive the prominence they deserve.

On the other hand, a long account dealing with the passage of the uterine sound by touch, not sight, might have been, with advantage, much curtailed, as at best it is a dangerously septic proceeding.

Nor do we think the advice to oil a sound before its introduction is safe in practice, and we do not believe with the authors that in any way it can prevent the onset of uterine inflammation.

The prominence given to sponge tent dilatation is, to say the least of it, unfortunate—more especially as the authors elsewhere show that they are by no means enamoured of the method of dilatation by these highly dangerous instruments.

An article headed "Anæsthesia" is entirely devoted to the praise of chloroform as administered in Edinburgh, and suggests an unconquerable patriotism, rather than a broad and cosmopolitan grasp of the subject, which is usually considered an advantage in books dealing with scientific topics.

A short but readable account of micro-organisms, with means to compass their destruction, follows, and then we are brought over the familiar ground of para- and perimetritis with many other gynecological complaints which, for the most part, do not admit of any individuality in a book of this kind.

As gynæcology is almost entirely surgical in its methods, we turn to the operative portion of the work with a feeling that our readers will form their opinion as to the practical usefulness of this manual by the excellence of these sections.

The authors have re-written many of these chapters, and brought them fairly up to date. Thus panhysterectomy, colpotomy, and morcellement by Doyen's method, all receive due notice.

It is strange to find external fixation of the stump and hysterectomy by Schroeder's method still discussed and contrasted one with the other, and to note that the authors, still believing that they stand out as rivals to the more modern operations, the true fact being that surgeons have long since discarded both one and the other proceedings, having weighed them in the balance and found them wanting.

The Diseases of Women. By J. BLAND SUTTON, F.R.C.S. Eng., and ARTHUR E. GILES, M.D., B.Sc. Lond., F.R.C.S. Edin. London; The Rebman Publishing Company, Ltd. 1897. Demy 8vo. Pp. 422.

It was with considerable interest we undertook the perusal of this book, for surely a work of its size is a distinct want in gynæcological literature, and the fact that the name of Bland Sutton was associated with it gave a prospect that at length a short student's manual of high excellence had been produced.

It is, therefore, with much regret that we find our preconceived notions somewhat modified by having read it, as the book, we feel sure, has fallen far short of the high expectations that could not fail to have been entertained of it.

The publishers may be congratulated on the thorough manner in which their part of the work has been accomplished, thereby giving us one more example of artistic excellence in medical books.

Those already conversant with Dr. Sutton's published works will be struck with the marked resemblance this bears to those which have gone before, and it seems to us as though he need only have permitted his former publications to be freely transcribed in order that the greater portion of the present volume might see the light.

The authors claim in the Preface that their earnest desire is that it may "enable students to practise this important department of surgery with credit to themselves," and it is precisely this claim as to the practical efficiency of the book with which we find fault, for it inadequately deals with symptoms, diagnosis, and treatment.

It would serve no useful purpose to bring our readers chapter by chapter through the book; instead of this a couple of what may be regarded as typical sections in the work will be dealt with.

Lacerated perinæum is a subject the true understanding of which is usually considered of the utmost importance, as affording a starting point for many of the gravest after-results. Thus, in Thomas' and Mundi's *Gynæcology*, a list of eleven complications is recorded as being often directly traceable to this accident, and no one reading this list will, we think, gainsay its accuracy.

In the present work, on the other hand, the consequences of complete rupture are enumerated as follows:—"Tendency to prolapse of the vaginal wall, which may be followed by a more complete hernia. Diminution of rectal control, causing incontinence of fæces and flatus. The latter symptoms are wanting in incomplete tear."

Could any information be more scrappy, or less calculated to turn out an efficient practitioner than this?

Nor is it even accurate so far as it goes. Complete laceration is not always attended with incontinence of fæces, nor is it usually followed by either prolapse of the vaginal wall or hernia, in this respect differing markedly from an incomplete tear. As regards treatment, too, there is much to find fault with. One operation alone is described—the flap-splitting method, closely associated with the name of Lawson Tait.

But what a caricature on the original operation!—with plates after Fancourt Barnes calculated to lead the uninformed to believe that the world is indebted to the latter surgeon for it, and all mention of Tait deferred until the end of the article, when it is noted that the principle of the operation was introduced by him.

Could any description of Tait's great operation be more unworthy than this? and he certainly has every reason to

resent the effort to modify his plans by the employment of shotted sutures.

In turning to the section dealing with ovarian tumours, we find much to note of a sufficiently unsatisfactory nature; thus—"In a general way it may be stated that it is impossible to accurately diagnose between the various forms of tubal and the following forms of ovarian disease:—

"1 Tubercular abscess of ovary.

"2. Apoplexy of the ovary.

"3. Small ovarian cysts and tumours, &c."

And again—"The recognition of a large uncomplicated ovarian cyst is one of the simplest processes in clinical surgery."

It would be interesting to know how many modern gynaecologists share these views with the authors, for surely a greater contradiction of facts it is difficult to conceive.

To diagnosticate a small ovarian tumour, and to distinguish it from tubal disease, is a feat that any educated surgeon need not feel any particular pride in accomplishing. On the other hand, the presence of a large ovarian cyst will often cause experienced operators to make but a guarded diagnosis.

It is, moreover, curious the one diagnostic sign—*i.e.*, the palpation of the pedicle through the vagina or rectum—which often alone serves to discriminate these tumours from cystic kidneys, spleens, myomata, or encysted peritonitis, is altogether ignored in the present work.

These examples, which by no means exhaust our list of objections, will serve, we think, to justify the adverse opinion we have been compelled to form of this work.

The most we can say in its praise is that it is written in a most readable style, and will afford a student a smattering of gynaecology sufficient, in all probability, to enable him to cut a respectable figure in any ordinary examination.

Lawson Tait's Perineal Operations. By W. J. STEWART M'KAY, M.B., &c. London: Baillière, Tindall and Cox. 1897. Demy 8vo. Pp. 69.

THIS little book has been written with the consent of Mr. Lawson Tait, who contributes his views on this subject in a

short Preface, and we believe it contains at once the most accurate and fullest account of the operation perineorrhaphy, as performed in Birmingham.

The work, under these circumstances, is a timely addition to the science and art of gynecology, and we recommend it for the perusal, not alone of operating surgeons, but also to the writers of students' manuals.

We can also assure our readers that the operation, as described here, is infinitely more simple and efficient than the many spurious imitations known as "Modified Tait's."

A Pictorial Atlas of Skin Diseases and Syphilitic Affections.

Edited and annotated by J. J. PRINGLE, M.B., F.R.C.P.
Part XII. London: The Rebman Publishing Company,
Ltd. 1897.

THE insertion of a full Index in this, the twelfth, part of Dr. Pringle's "Pictorial Atlas" points to the completion of the work. We have repeatedly expressed our high opinion of its merits, and it only remains for us to congratulate the editor and the publishers on the very successful manner in which they have discharged their respective functions in regard to the bringing out of the Atlas.

The present part contains five plates of photo-lithochromes. They are numbered from 46 to 50, so that the whole Atlas consists of 50 plates. The subjects illustrated are—syphilitic chancre of the nostril (hypertrophic form), syphilitic chancre of the tonsil (diphtheroid form), both patients having been under the care of Professor Alfred Fournier, at the Saint Louis Hospital, Paris; xeroderma pigmentosum (R. Du Castel); impetigo contagiosa (Lucien Jacquet); urticaria pigmentosa, with atrophic spots arranged in transverse bands (H. Hallopeau); syphilitic chancre of the lip, in the scabbed and erosive forms, and syphilitic chancre of the tongue, ulcerative form (Alfred Fournier).

Probably the most interesting of the whole series of illustrations in the twelfth part of the Atlas is that of Baretta's model of urticaria pigmentosa, an "affection which was first observed in 1869 by Nettleship at the Blackfriars Hospital,

London, and to which Sangster, in 1878, gave the somewhat unsatisfactory name by which it is known."

On page 279, we find a valuable note by Dr. Pringle on the nomenclature of skin diseases. He writes: "The feminine substantive Xerodermia is more accurate than the neuter Xeroderma, as conveying the idea of a *state* of dryness of the skin, rather [than] a mere dry skin. The same remark applies to the nomenclature of other skin affections—*e.g.*, sclerodermia."

The letterpress of the whole Atlas runs to 302 large folio pages. We may remind intending purchasers that each part costs half a guinea—a sum which cannot be regarded as excessive considering the excellence of the work.

Transactions of the American Orthopædic Association.
Tenth Session. Vol. IX. 1896.

THESE Transactions are well bound, printed and illustrated. The most interesting contents are:—The President's Address on the "Scope of Orthopædic Surgery;" "Potts' Disease;" "Mobility of the Normal Spine in Recumbency;" "Lateral Curvature" (several papers); "Roentgen-Ray Skiagraphs;" "Abscess in High Dorsal Caries." Many of these papers are of value. That on the Apparatus for Potts' Disease is especially good. The photographs are excellent.

Sick-room Cookery and Hospital Diet, with Special Recipes for Convalescent and Diabetic Patients. By MAUDE EARLE, Staff-Teacher of the National Training School of Cookery, London; Lecturer on Sick-room Cookery. With Notes on the Feeding of Infants. By FRANK MADDEN, F.R.C.S.; Medical Superintendent of the Hospital for Sick Children, Great Ormond-street.

IN this excellent guide for nurses and for domestic use the opening chapters are devoted to the classification of foods, their value for sustenance and repair, the effects of the various methods of cooking, and scales of diet suitable during many illnesses and in old age. The diabetic becomes an

object of envy. Among the exhaustive lessons on invalid cookery we find all the new processes for extracting nourishment in concentrated form, and for peptonising food where necessary, followed by a complete *répertoire* of dainty dishes for convalescents. We strongly recommend the work, not only for the 'sick room, but to young housekeepers, as a general cookery book, supplying a real want where the family is small and nicety appreciated. Full directions are given for soups, fish, entrées (in delightful variety), vegetables, game, sweets, cakes, puddings, and sauces. In addition to this, the lessons in nursing will prove of great practical value to the uninitiated.

Hygiene and Public Health. By LOUIS C. PARKES, M.D., D.P.H. Lond. Univ.; Fellow of the Sanitary Institute, and Member of the Board of Examiners; Lecturer on Public Health at St. George's Hospital Medical School; Medical Officer of Health and Public Analyst for the Parish of Chelsea. Fifth Edition, with illustrations. London: H. K. Lewis. "Practical Series." 1897. Crown 8vo. Pp. 551.

ON more than one occasion it has been our pleasing duty to speak well of this useful and successful handbook. The present, or fifth, edition has been revised and, to a slight extent, enlarged when it has been necessary, in order to keep abreast of advancing knowledge. For example, clear information is given at page 434 about antitoxins and immunity. In the index Dr. Parkes coins a plural of "virus," which is certainly wrong, for "virus" is neuter, not masculine, and occurs, so far as we know, only in the singular number. The word "viri" means "men" or "heroes," not "poisons."

There is no mention of the Report of the Royal Commission on Vaccination, which is, perhaps, all for the best.

We have again to express the opinion that Dr. Parkes has written a readable, meritorious, and reliable text-book on hygiene.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

The Army Medical Service.^a By SIR WILLIAM THOMSON, M.D.;

President of the Royal College of Surgeons in Ireland.

IN inaugurating to-day the winter session of your studies I have to repeat on behalf of the Council, the Professors, and myself our most cordial welcome. If these words are trite, I ask you to believe that they are very sincere; for to us who are your seniors it is always a pleasant duty to meet generation after generation of our younger fellow-students who are setting out upon the path which we, too, have trod.

Days like this may tell us that we are growing older, which is not a pleasant reflection; but they bring back to us the memory that we, too, had a beginning of study as you have; that we were filled with all the hopes and legitimate ambitions which I trust inspire you; and that we made our youthful resolves, as I beg of you to make them to-day, to strive with all our might to do our duty in the world.

The school which you have joined is one to which you may well be proud to belong. It has had a long and illustrious life. Out of these halls have passed crowds of men who have gone into all the corners of the earth doing credit to the fair name of their country, and upholding, as the phrase of the declaration of our licentiates goes, "the honour and dignity of our College." Among many others there occur to me at this moment three or four who have become exceptionally distinguished. One is our countryman, Sir William MacCormac, who at the present moment fills the Presidential Chair of the Royal College of Surgeons in England, and on whom her Majesty has recently conferred a baronetcy—a man known the world over for his splendid attainments. In Australia, Sir Thomas N. Fitzgerald, the leading surgeon of Melbourne, stands alone in that country as the first

^a An Address delivered to the Students at the opening of the Schools of the Royal College of Surgeons in Ireland, on Monday, November 1st, 1897.

medical recipient of a royal distinction. In India the principal medical officer of the army is Surgeon-General Gore, whom so many of us know and value so highly ; and in Ireland to-day the Army Medical Department is presided over by our friend, Surgeon-Major-General Preston, who, like his comrade, bears honourable wounds received on the field of battle.

The school to-day is, I am glad to say, full of the energy and vigour which are so necessary to success, and I am very sure that if you will only take advantage of your opportunities there are open to you all the rewards which are to be earned by absolute devotion to the work of your profession.

But let me say that this school has not a monopoly of excellence. The other medical schools of Dublin and of Ireland at large are all animated by the same desire to excel—to turn out the student fully prepared for the labour of his life. Whatever rivalry exists is not a parochial one. I trust we all cling to the school in which we were taught. We like to revert to our associations with it, to watch the career of our companions of those days, and to rejoice when we see some new glory added to its name. I do not care much for the man who, without some very special cause, does not stand up for his school or college or university. I like him to think it the best. I like to know that his young and generous affections have fastened themselves upon the place where his early thoughts began to develop and were shaped for the career which he has chosen. Therefore I hope you will stick up for your school. But I should like you to remember that for the outside world there is even a higher ground upon which you may stand. You may belong to this College or that University, but you are students above all of the Irish Medical School, and in that fact you may well find a power to evoke your pride. It has a record which is one of the brightest of this land, and it has helped in no small degree in the past, as it does now, to create and to mould the modern teaching of medicine and surgery. I congratulate you on belonging to it, and on holding the belief that you can find at home teachers as zealous and as learned as are to be found in any other part of the whole kingdom.

Last year when I had the honour of addressing you from this chair I endeavoured to impress upon you the advantages which members of our profession must derive from a liberal education, and I tried to interest you in the cultivation of general literature as a relaxation from the severer work in which you will be engaged. To-day I intend to occupy a short time in dealing with

one or two matters which more nearly affect the actual study in which you are embarked.

I think I may assume that all of you have already begun to think of what you will do when you have passed your final examination. Some of you will probably pass into the struggle of civil practice, with its great possibilities and great uncertainties. Some of you look forward to the public services, which have the advantage, at all events, of security of income, with a fair share of honours. You cannot, therefore, fail to be interested in the agitation, which seems to arise with almost rhythmical regularity, concerning the Army Medical Service.

You are, of course, aware that at the examinations held in August last candidates to fill 36 places were advertised for, and that only 22 presented themselves, and that in February last there were 35 vacancies, and only 26 candidates, of whom but 13 qualified to enter the Service. In the two preceding competitions practically the same state of things existed. The result is that at the present moment there are over 80 places vacant—places which cannot be filled. That is a very startling fact, because in some respects the Army Medical Service offers a splendid career to a young surgeon. It has its risks, of course, but a man who enters it must accept them, and we know that they have not in former times prevented some of the best of our licentiates from joining. In a monetary sense it far exceeds the combatant branches. In addition to better pay it is possible for a man to leave the Service after 20 years with a pension of a pound a day, and so on in proportion to time. Compared with the ordinary results in civil life this is a very exceptional position; and, therefore, the dissatisfaction which has led up to this abstention of candidates must be of a serious character.

Several Commissions have sat to take evidence as to these grievances, and warrant after warrant has been issued yielding certain claims. But a number still remain unsatisfied. I do not propose to occupy your attention with these in detail, but I will shortly refer to one or two that stand pre-eminent.

The primary grievance is a question of rank, and here we find the views of the combatants and the surgeons directly at variance. The medical officers declare that although they are styled surgeon-captains, and surgeon-majors, and so on, these titles give them no real rank whatever in their relation to other officers and men of the army, and that they are constantly subjected to humiliations which make their position unbearable. The rank is a departmental rank—that is, they are surgeon-captains within their own department—and it is alleged that the other officers make this

difference felt in such a way that the example set is followed by the rank and file. Indeed, at the Camperdown Commission of 1890 one very distinguished general officer said he addressed the head of the Army Medical Department as "W. MacKinnon, Esq., C.B., Director-General Army Medical Staff," although the title to which that gentleman was entitled was "Surgeon-General MacKinnon," and he was marked in the Army List as "ranking as Major-General."

Now, it may be supposed that the army surgeons have only to do with the sick in hospital, and the wounded on the field. But they have actual military duties to perform. They have under their direction a body known as the Medical Staff Corps, which is composed of bearers and male nurses, and, generally, of the men who aid in rescuing the wounded, and carrying all the equipment of hospitals on the field. These men are drilled by medical officers and marched into action by medical officers. The position of civilian Mr. John Smith, Surgeon, then, in command of a disciplined bearer company would thus be rather an anomalous one.

The case on the opposite side is that medical men in the army have only rank in their own department, and that to give them real rank in the army, or to call them after the form of "Captain Smith, Surgeon," would be to place them in a ridiculous position. It has been even unwisely alleged that if this plan were adopted a case might occur in which a medical officer would take the command of the combatants in the event of the officers above him being disabled. As a matter of fact, such a thing has happened when all the combatant officers were wounded, and you will be glad to hear that the surgeon—an Irishman, and a Fellow of this College—led his men to victory, and was promoted for it. But no one has ever made such an absurd claim as that of combatant command. Moreover, in other corps, officers who are given rank have what is called limited command—that is, only over the men in the special body to which they belong. Therefore, there is no force whatever in the objection to which I allude, and it appears to have been made without knowledge of the laws of the Service.

But we have examples in other countries of how the system works. If we take Switzerland, we find a citizen army which is turned out every year for a month's training. It is put on war footing to carry out the manœuvres. I am assured that there are many things in that army which we might copy with advantage. But there we find the private practitioner summoned to his duty as a military surgeon. He at once becomes captain or colonel, as the case may be, and, after his labours are over, he reverts to his old position, and assumes his civilian title once more. His

distinguishing mark on the field is the Geneva Cross on his arm, and no one thinks of his being mistaken for a combatant. But it may be further stated on behalf of the army surgeons that they are the only officers who are denied the simple title of their rank. The Captain of Engineers is not called Engineer-Captain, but Captain, Royal Engineers. Nor do we hear of Paymaster-Colonel, or of Army-Service-Corps-Major. The officers of the Army Service Corps are now majors, captains, lieutenants, and the same titles are extended to the Pay Department and to some army school-masters. There are no prefixes to dilute the rank.

As to the Pay Department, the answer is made that the officers have already attained rank as combatants. That I admit. But I reply that they have resigned their positions as combatants and can never go back. They have passed into a branch which is purely civil; they certainly have not to discharge their duties under fire; but still they continue not only to hold these titles, but to pass on step by step until they receive the title of Colonel. It is true also that some of these are honorary only, but they have a distinct social significance, and they serve to show that there is a liberality in the extension of these advantages to other departments which is refused in the case of the Medical Department.

Let me say at once that I am trying to bring before you some points in the case made by the medical officers. I see certain difficulties in the way. But then I must remember that we are looking at the whole matter from a standpoint outside the army. We cannot understand the thousand and one matters which cause friction as do the men who spend their lives in the Service. All we can say is that more than three-fourths of the medical officers claim army instead of departmental rank; that they are in the best position to judge of the importance of this concession; and that the solutions of the difficulty which they propose are based upon experience.

A second claim which is made is that the whole of the Medical Service should be converted into a Royal Corps. The arrangement which at present exists is a curious one. The surgeons form a body which is called officially the Army Medical Staff. All the men who constitute the bearer companies, and male nurses, and who are concerned in general hospital work, whether in the field or at stations, are called the Medical Staff Corps. In other words, the officers are in one group, and the men are in another, and they do not even wear the same uniform. If this plan were carried out throughout the army we should have an extraordinary condition of things, for the combatant officers would be nominally separated from the soldiers whom they had to command in action. The

necessity of having the whole medical apparatus—if I may so call it—of the army formed into one body is obvious.

In these days the succour of the wounded is one of the most important obligations which attach to the General conducting a campaign. Organisation and a perfect technique are indispensable if the maimed are to be rescued quickly and successfully treated. The men who have to do this work should be under the sole direction of officers whose training fit them for that position. For really efficient work it is essential that these two bodies should be formed into what is known as a unit. In this way the men know their officers, and the officers their men. In a united corps the surgeons would soon judge the quality of their subordinates, their proficiency, how far they could be relied upon in difficulty, and all the advantages which arise from the daily contact of commander and men.

If such a body existed it would be possible to improve the internal defects which now exist in the Medical Department itself, and to place it on a higher level of efficiency by a system of continued professional education. But at present the officers and the men are in two separate groups. They are moved about independently of each other, and when an emergency arises so many medical items are suddenly thrown together to settle down as best they may. It is very much as if in the case of a battery of artillery a number of officers, gunners, and drivers who had never met before were sent to take charge of guns that they had never fired, and horses they had never ridden, and were bundled into action at once. If this strange separation is good, why does it not prevail in the Royal Engineers or other departments? But it would be destructive of that pride which every soldier feels in the branch to which he belongs. The medical officer, then, naturally anxious that his department should be kept at the highest standard of efficiency, asks to have the present system of dual bodies abolished, and by the creation of a Royal Medical Corps to establish that cohesion and *esprit* which unity alone will give.

There are other matters of perhaps smaller importance which I will not discuss, but in their aggregate they have served to create a discontent among army medical officers which has culminated in the present condition. I know that the combatant branches of the army declare that they wish to have good surgeons, and that they would be glad to remove any causes of complaint. But they are unanimous on the question of rank, and they will not yield upon that point. I have said already that we are only outsiders; but I think we are able to say from what we see that that demand is crucial. Whatever is done, the rank which is given to the medi-

cal officers must not be a mere departmental name, but a real rank, which will secure them from the petty indignities to which their position subjects them. The present rank means nothing, and the medical officers have learned to understand that they are only civilians in the eye of the army. Nothing, I think, could have been more unfortunate than the application of this term. It has been made free use of, and it has served to establish many in their hostility to the medical officers. But are they civilians? They hold commissions in her Majesty's army; they wear a uniform, and carry arms; and in an army they are placed in charge of the thousands of armed men and the transport which go to make up a hospital train. In action they are with the fighting line. Of necessity they are where the fire is heaviest, for their duty is to relieve the wounded on the spot where they fall, and for this reason you will realise why it is that the death-rate of army medical men is nearly twice as great as that of the combatant officers. I looked into the Army List the other day and I found that nearly twenty surgeons who are actually serving, or are alive and retired, have won the Victoria Cross. And I noted also that they are called "military recipients" of this splendid reward "for valour" in battle. If they are "military" they are not "civilian."

I press my argument further by pointing out that no civilian can win the decoration. The Victoria Cross warrant expressly declares that the Cross is for the naval and military services only, and that no "other circumstances or condition whatsoever save the merit of conspicuous bravery shall be held to establish a sufficient claim to the honour." What, then, becomes of the allegation that army medical officers are only civilians? They are not only in the army, but they are of the army. Every circumstance of their official lives proves it, and there will be no contentment until that fact is established by warrant beyond all cavil. I have brought these matters before you so that you may understand some of the reasons of the outcry which is raised against the Army Medical Service. Even with these drawbacks many will find it to their interest to go forward for appointments. I by no means blame them. The competition of life is very keen, and I do not advise anyone to hold back. Perhaps I shall be condemned for this statement, but who, I ask, will provide an equally secure position for the young men who follow counsels of another kind? I know of none; and it seems to be asking too much of our students to stand back, and thereby perhaps sacrifice a life's career. Each knows his own necessities and desires.

We will do all in our power, as we have done, to help forward army medical reforms; but we must not speak hardly of those

who, in spite of disadvantages, seek entrance into the Service. At the same time the authorities must know that many brilliant men are looking elsewhere for a career, and that it depends upon an enlightened policy whether the Medical Department of the army will be again largely recruited from among the most promising of our young surgeons.

I pass from this question of the day to congratulate the prize-winners. Mr. D. A. Fitzgerald and Mr. F. J. Palmer have been awarded the Carmichael and the Mayne Scholarships respectively, and having regard to the extent and severity of the course their success is a brilliant one. In the classes Mr. J. S. P. Stewart has won three firsts and a second, and Mr. E. Glenny two firsts and a second, a result which points to still higher distinction in the future. Then Miss Dreaper and Mrs. Hennessy have each carried off a first and a second prize, and thus illustrated the fervour with which our lady students devote themselves to their work. The rest of the list shows that a large proportion of the class has engaged diligently in the studies of the various years, and it is a special gratification to find that in every instance a candidate has qualified for a first rank. Of the number who just failed in the struggle I have no record, but I wish to encourage them and all others to try again. They must not take defeat to heart too keenly and throw down their hands in despair. I have known some distinguished men who never could win a school prize, although later they earned the highest successes in life; and I trust that some of you who miss your names from the returns will yet achieve that which you have lost to-day. There is much that I should like to say to you now, for next year another President will speak to you from this place; but time is running out and I have already trespassed upon your indulgence. But I should like you always to bear in mind in your work that examinations are not the only things for which you should read. To have in your mind constantly that you must only make up what will get you through the portal is demoralising; it begets the worst of all mental processes—cramming. Prepare for your examination by all means, but let your reading be wide and generous. And, next, I sometimes feel that students do not value as they ought the work in the hospital wards. Give to this all the time you can spare, not with your hands in your pockets, as I occasionally see, but with your mind keenly set upon the cases which are before you. For, necessary as all teaching in the schools is, and important as it is that you should be highly informed in the subjects taught here, it is with the living sick you will have to deal when you come to practise. No amount of

knowledge will avail you unless you can apply it—unless you are able to recognise disease or injury and use your remedies. In a very few years these classes which I now address will have passed away into the world. You will be scattered here and there; some in large cities, but many in places where you will be isolated from the helping mind and hand of a member of your profession. Then you will realise in its fullest extent what responsibility is—what it means to have in your charge a case which you find difficult to read and which you must deal with alone. Nothing will be more distressing to you than this failure to help if after all the fault is your own. I ask you, therefore, to try to realise that responsibility now before the day of humiliation comes, and by your industry to relieve yourself of the possibility of self-censure.

With these words I draw to a close, only waiting to assure you that your teachers will do their part, that we all wish you the highest success, and that we shall look to you with confidence to uphold the reputation of the medical school of this old city of Dublin.

Medical Arrangements for the Tirah Expeditionary Force.

WE have received from Surgeon-Major-General ALBERT A. GORE, M.D., Principal Medical Officer to Her Majesty's Forces in India, the official statement of the medical arrangements made under his supervision for the Tirah Expeditionary Force, and approved by His Excellency the Commander-in-Chief in India. The document is dated Army Head-Quarters, India, Medical Division, Simla, 3rd October, 1897, and serves as a useful *résumé* of the most modern arrangements in Field Service in India.

Under the heading "Organisation," the composition of the Expeditionary Force is set out in Section I. The main column consists of two divisions of troops. Then there are the Peshawar column, the Kurram movable column, and the Rawal Pindi reserve brigade. The numerical strength of the force is not stated, but it must be considerable.

SECTION II.—ADMINISTRATION.

9. The following principal medical officers are sanctioned:—

For the Army Staff.

Surgeon-Colonel (with temporary rank of Surgeon-Major-General) G. Thomson, C.B., Indian Medical Service.

Secretary, Surgeon-Major W. A. Morris, Army Medical Staff.

First Division.

Surgeon-Colonel E. Townsend, Army Medical Staff.

Second Division.

Surgeon-Colonel G. M^cB. Davis, D.S.O., Indian Med. Service.

Line of Communication.

Brigade-Surgeon-Lieutenant-Colonel (with temporary rank of Surgeon-Colonel) W. E. Saunders, Army Medical Staff.

Peshawar Column.

Brigade-Surgeon-Lieutenant-Colonel R. G. Thomsett, Army Med. Staff.

Kurram Movable Column.

Brigade-Surgeon-Lieutenant-Colonel W. R. Murphy, D.S.O., Indian Medical Service.

Rawal Pindi Reserve Brigade.

While at Rawal Pindi, the medical administration will be conducted by the Principal Medical Officer, Rawal Pindi District, and should the brigade move forward it will come under that of the Principal Medical Officer of the force to which it may be attached.

10. The medical staff offices will be provided as follows:—

For the Army Staff, from the Malakand Field Force^a (2 clerks).

For the 1st Division, from the Mohmand Field Force (2 clerks).

For the 2nd Division, from the Madras Command (2 clerks).

For the Line of Communication (1 clerk from the Bombay Command, and 1 employed temporarily).

For the Peshawar Column, from the Bengal Command (1 clerk).

For the Kurram Movable Column, from the Kohat Force (1 clerk).

11. Stationery will be supplied from any station hospital, the latter replacing the issue from departments concerned.

12. The general service 80lb. tent authorised for each medical staff office will, if not in possession, be obtained from the Rawal Pindi Arsenal, and the furniture from the Military Works Department, Punjab Command.

SECTION III.—CORPS-UNITS.

13. Each corps-unit and each commissariat-transport unit will be equipped as laid down in Appendix No. 1, *Field Service Departmental Code, Medical*, and first field dressing packets will be issued to every officer and soldier.

^a Two temporary clerks will be employed for the Malakand Field Force instead, namely one first grade and one second grade.

14. Collateral medical charges will be formed locally for the several batteries of Artillery and companies of Sappers and Miners.

15. A strict medical examination of officers, troops and followers will be made as laid down in paragraph 49, *Field Service Departmental Code, Medical*.

16. A Staff Surgeon, as a collateral charge, is sanctioned for the Army Staff, 1st Division, 2nd Division, Line of Communication, Peshawar Column, Kurram Movable Column, and Reserve Brigade.

17. An experienced Hospital Assistant with a pair of field medical panniers and a general service 80 lbs. tent will be placed at the disposal of the staff surgeon of the Army Staff by the Punjab Command.

SECTION IV.—FIELD HOSPITALS.

18. Field Hospitals will move to the front under the orders of the Quarter-Master-General in India.

19. In addition to the authorised reserve to be always maintained by the Commissariat-Transport Department in the advanced bases, each field hospital will take a reserve of 25 per cent. of medical comforts, and a box of reserve medicines, *vide* Appendix 20, *Field Service Departmental Code, Medical*.

20. All field hospitals detailed for the Expeditionary Force (with the exception of No. 11 British and No. 64 Native on the Line of Communication, and the Field Hospitals of the Reserve Brigade, which will be supplied with tongas and dandies) will be equipped with riding mules or ponies (with saddles) and dandies.

21. Transport will be supplied as follows:—

1st and 2nd Divisions—Pack mules.

Line of Communication—Normal scale.

Peshawar Column—Normal scale.

Kurram Movable Column—Normal scale.

Rawal Pindi Reserve Brigade—Normal scale.

22. The supply of ambulance tongas for the line of communication from Kohat to Khushalgarh will be arranged for by the Punjab Command.

SECTION V.—FIELD MEDICAL STORE DEPOTS.

23. No. 1 Field Medical Store Depot, which is already equipped, will supply the medical units of the 1st division, and No. 2 Field Medical Store Depot, which will be mobilised at Meean Meer, will supply those of the 2nd division. Both these depôts will take a special reserve of 100 lbs. of Quinine, and will move forward under orders issued by the Quarter-Master-General in India.

24. These depôts should be as near the advanced field hospitals as possible, and will therefore be provided with mule transport.

SECTION VI.—LINE OF COMMUNICATION.

25. The line of communication will extend from Kohat inclusive to Tirah, and will include the posts on the Samana Range.

26. A portion of Section C, No. 3 British Field Hospital will be sent to Parachinar with the 2 guns of 9th Field Battery.

27. A rest dépôt hospital, 25 beds for British troops and 25 beds for Native troops and followers, will be formed under the orders of the Lieutenant-General Commanding the Forces, Punjab, at Khushalgarh in British Private's tents; also one at Goombut if deemed necessary.

28. Railway ambulance carriages (properly fitted with dandies, which will be supplied by the Commissariat-Transport Department) will be provided at Khushalgarh and Peshawar, on the requisition of the Senior Medical Officer, for conveying the sick and wounded to the general hospitals at Rawal Pindi and Nowshera respectively.

29. Any additional ambulance transport required for lines of communication will be provided by the Commissary-General, Punjab Command.

SECTION VII.—GENERAL HOSPITALS.

30. The following general hospitals will be established :—

No. 1 British for 500 beds at Rawal Pindi.

„ 2 Native „ 500 „ at „

„ 3 British „ 250 „ at Nowshera.

„ 4 Native „ 500 „ at „

„ 5 „ „ 200 „ at Kohat.

31. The general hospitals at Rawal Pindi will receive the sick and wounded from the 1st and 2nd divisions; the general hospitals at Nowshera will receive the sick and wounded from the Peshawar Column and Malakand and Swat Valley forces, and the Native general hospital at Kohat will receive the Native sick and wounded from the Kurram Column and from troops on the Line of Communication, and from thence will be passed on to Rawal Pindi if necessary.

33. A special extra reserve supply of antiseptic gauze (3,000 yards), carbolised catgut (5 lbs.), and Esmarch's bandages (12 sets) will be sent to the Kohat general hospital for use with the sick in the front if necessary.

SECTION VIII.—RETURNS.

34. Field Service returns will be taken into use from 9th October, 1897.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SESSION OF 1896-97.

President—JAMES LITTLE, M.D., F.R.C.P.I.

General Secretary—JOHN B. STORY, M.B., F.R.C.S.I.

SECTION OF MEDICINE.

President—Sir GEORGE F. DUFFEY, M.D., President of the Royal College of Physicians of Ireland.

Sectional Secretary.—H. C. TWEEDY, M.D., F.R.C.P.I.

Friday, May 21, 1897.

The PRESIDENT in the Chair.

Charcot's Disease.

DR. CONOLLY NORMAN related a case of "Charcot's Disease," exhibited the patient, and also exhibited skiagrams showing the condition of the bones.

PROFESSOR BENNETT said he thought that the point was the nature of the change in the joints. Was the case to be regarded as a variation of chronic articular rheumatism, or as a distinct disease? His knowledge of Charcot's disease was very small, he said, having only seen one specimen in this city. He had seen Charcot's specimens exhibited in London, at the late Congress. The destruction of bone was specially great in Charcot's disease—much greater than in chronic articular rheumatism. He was inclined to think that the disease was essentially the same as chronic articular rheumatism in pathological detail, except that there was a great deal of effusion. As a rule, chronic articular rheumatism was, in this country, attended with effusion, but not so in France, as proved by the French term applied to the disease—*arthrite sèche*.

DR. FINNY said that in his limited experience of Charcot's disease he had not found the cases quite the same as Dr. Norman's. The effusion in the joints which he had seen was very much greater, and the backward movement of the leg was one of the remarkable features. He had not himself found in neuritic cases that motility in the joints to which Dr. Norman had referred. He was very much in a difficulty as to the disease being tabetic, because of the mental condition of the patient, and it was not easy to test for knee jerk. If it was a case of tabes, it was interesting to note that the patient was unaffected in the upper

limbs; of course, the disease might be limited to the lower extremities for a long time, but there seemed to be none of the other occasional symptoms. The case was one which, he was sure, must remain for a certain time in an unknown category.

DR. NORMAN, in reply, said that everyone was familiar with the doctrine that Charcot's disease was merely a variety of chronic articular rheumatism. He thought, perhaps, that a truer view to take was that some nervous disorder with which they were at present unfamiliar was associated with chronic articular rheumatism. With regard to the absence of backward displacement to which Dr. Finny had referred, he thought it possible that the condition of disturbance in the joints had been arrested before the customary destruction of the posterior ligaments. He could not say how long the condition had lasted, but it did not exist in 1890, while it did in 1896, and, according to the patient's own statement, the disease would have commenced in 1895. The only sign of tabes which she exhibited—excepting the condition of her legs—was the Argyll-Robertson phenomenon. There was a great deal of anæsthesia still in her legs, which, of course, was in favour of alcoholic neuritis. He thought it likely that the condition was still undescribed.

A Fatal Case of Alcoholism.

DR. KNOTT read a paper on "A Fatal Case of Alcoholism."
The Section then adjourned.

SESSION OF 1897-98.

President—EDWARD H. BENNETT, M.D., F.R.C.S.I.
General Secretary—JOHN B. STORY, M.B., F.R.C.S.I.

SECTION OF PATHOLOGY.

President—J. M. PURSER, M.D.
Sectional Secretary—E. J. McWEENEY, M.D

Friday, November 5, 1897.

The PRESIDENT in the Chair.

Opening Address.

THE PRESIDENT delivered his opening Address.

Suppurating Kidney.

The SECRETARY (Dr. McWeeney), in the absence of Mr. J. S. M'ARDLE exhibited a suppurating kidney. The specimen was an

enormous suppurating kidney which had been removed by Mr. M'Ardle some eight days' previous by nephrectomy. The kidney was riddled with abscesses, which differed in many respects from those met with in tubercular disease, and microscopical examination of the material which came from them did not reveal the presence of tubercle bacilli; it did, however, reveal a considerable number of organisms of different sizes and shapes, which proved on cultivation to be *Bacillus coli*. Shake-cultivations on agar-agar showed the cylinder of substratum quite broken up by the development of gas, which is exceedingly characteristic of *Bacillus coli*, and as the result of this gas development, and the appearances on gelatine, there could be no doubt that the micro-organism contained in the pus, and probably responsible for the condition of the kidney, was *Bacillus coli*. *Bacillus coli* has a tendency to invade the organs of the body *post mortem*, but this kidney was removed during the life of the patient, and *Bacillus coli* was the only organism found in the pus. The speaker was inclined to look upon the case as a primary infection of the kidney with *Bacillus coli*. So far as he (Dr. McWeeney) knew, there was no very good description of the state of the kidney when primarily infected by this organism. Should careful further examination of microscopic sections prove the case non-tubercular, then it should be regarded as a type specimen, and one upon which might be founded a description of the conditions found in the kidney as the result of primary infection with *Bacillus coli*. The patient (a female) was making a good recovery.

Genito-Urinary Organs from a case of Imperforate Anus.

The SECRETARY (Dr. McWeeney), in the absence of DR. A. J. HORNE, showed the genito-urinary organs, from a case of imperforate anus, showing persistent cloacal arrangement, bicornuate uterus, and unilateral cystic degeneration of the kidney. The specimen was obtained by Dr. McWeeney at the National Lying-in Hospital, Holles-street, from a female child with imperforate anus, under the care of Dr. Horne. The child was rather small, and appeared to be about the end of the eighth or commencement of the ninth month. Colotomy had been performed by Mr. M'Ardle, and the descending colon brought to the surface in the lumbar region and successfully opened. The child lived for two days after this procedure. Some fæces had come through the artificial anus, but, nevertheless, at the end of two days the child died. Shortly before death it was noticed that on pressure being applied to the suprapubic region fæcal matter exuded from the

vagina. At the *post-mortem* examination Dr. McWeeney had been much surprised at the state of affairs, and was unable at first to recognise the anatomical conditions. Accordingly he removed the genito-urinary apparatus, keeping it, as far as possible, in connection with the skin. On examining the specimen, the rectum was seen to become gradually narrower, and, running forwards, to join the neck of the bladder, so as to form a sort of cloaca which was continuous below with the vagina, and which received on each side the aperture of a uterine cornu. Both cornua were very greatly distended, forming thin walled structures larger than the urinary bladder, and containing urine. The left kidney possessed a ureter, which was at first very thin and narrow, and then becoming swollen out into a tube as wide as the small intestine, was lost upon the side of the left cornu of the uterus. It was this kidney which had furnished the urine which had distended the bladder and uteri; owing to the distension of the left uterine cavity the ureter had been pressed upon and undergone obliteration. The same process may have occurred at an earlier stage on the other side, for the right kidney was reduced to a small hydronephrotic sac, and its ureter was completely obliterated. The cloaca received the orifices of the bladder, rectum, and two uterine cornua, and was continued as a narrow tube directly into the vagina, opening externally between the two labia minora. Of the proctodæum there appeared to be no trace. With regard to the family history, the child previous to the present was born with the left hand amputated at the carpus. The first child was perfect.

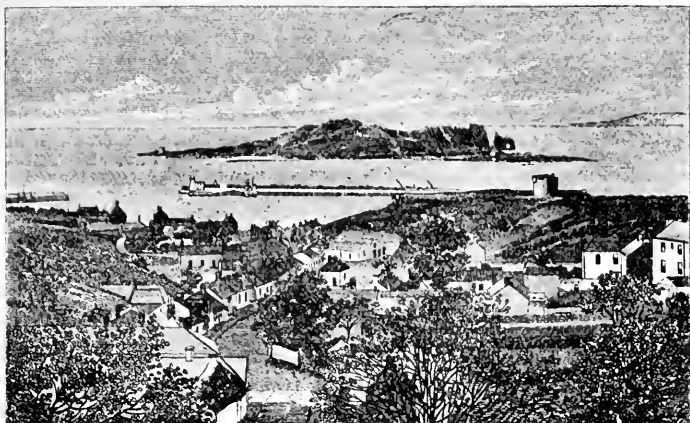
Osteo-Arthropathy.

DR. O'CARROLL showed casts and microscopic sections from a case of mixed tuberculosis and carcinoma of one lung, in which pulmonary osteo-arthropathy was an early and well-marked phenomenon. The patient, aged forty-nine at death, had been a year under observation in the Whitworth Hospital. Admitted on account of "pains in his joints," he was found to have mischief in the upper portion of the left lung, and he gave a history of cough dating from a year before. The condition was at first diagnosticated as cancer, but later, when signs of excavation manifested themselves, phthisis was suspected, even though the bacilli of tubercle were not found. This latter fact may be in part, perhaps, explained by the hæmorrhagic rather than purulent character of the sputum. Finally, the presence of cancer was made certain by the protrusion outwards into the axillary area of a tumour which involved three of the ribs and intercostal spaces. The necropsy showed the left lung

reduced practically to a single large abscess sac, in the wall of which, and continuous with the costal tumour, was a large alveolar cancer. Sections of a gland at the root of the lung showed similar cancer areas side by side with tubercular areas. The increase in the size of the extremities was easily differentiated from that of acromegaly by the characteristic shape, and by the presence of bulbar terminal phalanges. The pains were not due to chronic rheumatism, for they ceased and never recurred after his admission. There was no stiffness of the joints or pain on passive movement. The spine showed the lower dorsal kyphosis described by Marie. The case was of interest as demonstrating the existence in the lung of cancer and tubercle side by side, and of Marie's osteo-arthritis developed within a year after the onset of lung disease, which remained to the very end confined to one side. Professor O'Sullivan had made the microscopic part of the investigation of the case.

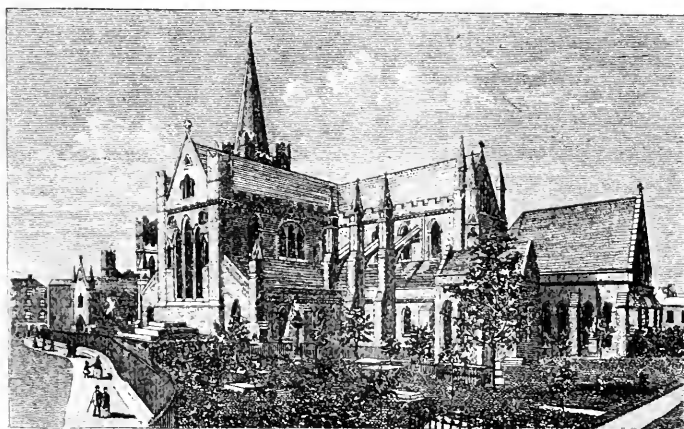
DR. MCWEENEY, in referring to the microscopic sections of the lung, said that one of them hardly seemed to reveal any structural details; the other section unquestionably showed carcinoma. As to whether tubercular disease was also present he hesitated to pronounce a definite opinion. Necrotic and caseated patches were visible, but patches of neoplasms were so frequently met with in this condition that it would not be right to say that there was certainly tuberculosis. He had not been able to see anything which seemed to him to give evidence of tuberculosis.

DR. O'CARROLL, in reply, said that in justice to Professor O'Sullivan he had asked him to prepare the sections at the last moment, and this would account for the specimen being thick. He had examined the second section with Professor O'Sullivan, who satisfied him that there were distinct caseous-looking necrotic patches with giant cells in them. He had hardly any doubt that Dr. McWeeney could be satisfied on this point. There were, of course, difficulties in the case, and the diagnosis was in favour of malignant disease. Clinically there were difficulties regarding the tuberculous signs. He thought that the case would bear some further study.



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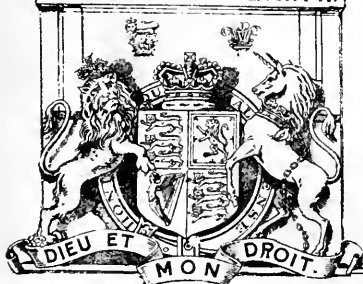
Uisce Slan

USK A-SLAN.

WATER OF HEALTH

HYGEIA

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"SIR CHARLES CAMERON SAYS. "CLUB SODA" NEUTRALIZES THE LACTIC ACID IN THE BLOOD WHICH GIVES RISE TO RHEUMATISM & OTHER AFFECTIONS. IT IS AN ANTIDOTE TO ACID DYSPEPSIA, AND PROMOTES DIGESTION AND IS THE MOST WHOLESOME DAILY BEVERAGE THAT CAN BE TAKEN"



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SANITARY AND METEOROLOGICAL NOTES.

Compiled by J. W. MOORE, B.A., M.D., Univ. Dubl. ;

F.R.C.P.I. ; F. R. Met. Soc. ;

Diplomate in State Medicine and ex-Sch. Trin. Coll. Dubl.

VITAL STATISTICS

For four weeks ending Saturday, November 6, 1897.

The deaths registered in each of the four weeks in the twenty-three principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000 :—

Towns	Weeks ending				Towns	Weeks ending			
	Oct. 16	Oct. 23	Oct. 30	Nov. 6		Oct. 16	Oct. 23	Oct. 30	Nov. 6
Armagh -	7.0	23.0	35.1	0.0	Lisburn -	21.3	17.0	8.5	21.3
Ballymena	16.9	22.5	11.3	16.9	Londonderry	15.7	20.4	23.6	18.8
Belfast -	18.9	18.0	24.3	23.0	Lurgan -	4.6	22.8	9.1	9.1
Carrickfergus	11.7	23.4	5.8	5.8	Newry -	16.1	23.2	8.1	20.1
Clonmel -	19.5	9.8	14.6	34.2	Newtownards	0.0	28.3	28.3	39.7
Cork -	19.4	18.7	12.5	20.1	Portadown	18.6	43.3	12.4	24.7
Drogheda -	33.0	30.4	11.4	11.4	Queenstown	5.7	11.5	34.4	5.7
Dublin -	23.3	20.3	26.5	20.3	Sligo -	35.5	25.4	40.6	50.8
Dundalk -	8.4	12.6	16.8	20.9	Tralee -	11.2	11.2	22.4	16.8
Galway -	22.7	18.9	15.1	34.0	Waterford	27.9	9.9	23.9	9.9
Kilkenny -	14.2	18.9	28.3	23.6	Wexford -	27.1	9.0	4.5	4.5
Limerick -	11.2	9.8	19.6	23.9					

In the week ending Saturday, October 16, 1897, the mortality in thirty-three large English towns, including London (in which the rate was 16.1), was equal to an average annual death-rate of 16.9 per 1,000 persons living. The average rate for eight principal towns of Scotland was 19.1 per 1,000. In Glasgow the rate was 19.4. In Edinburgh it was 21.7.

The average annual death-rate represented by the deaths registered during the week in the twenty-three principal town districts of

Ireland was 20·0 per 1,000 of their aggregate population, which, for the purposes of this return, is estimated at 984,720.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 1·9 per 1,000, the rates varying from 0·0 in sixteen of the districts to 6·2 in Portadown—the 3 deaths from all causes registered in that district comprising 1 from scarlatina. Among the 102 deaths from all causes registered in Belfast are 2 from whooping-cough, 2 from diphtheria, 2 from simple continued and ill-defined fever, 6 from enteric fever, and 1 from diarrhœa. The 28 deaths in Cork comprise 1 from whooping-cough and 4 from diarrhœa.

In the Dublin Registration District the registered births amounted to 163—90 boys and 73 girls; and the registered deaths to 161—90 males and 71 females.

The deaths, which are 3 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 24·0 in every 1,000 of the population. Omitting the deaths (numbering 5) of persons admitted into public institutions from localities outside the district, the rate was 23·3 per 1,000. During the forty-one weeks of the current year, ending with Saturday, October 16, the death-rate averaged 30·1, and was 3·3 over the mean rate in the corresponding period of the ten years 1887–1896.

As in the week preceding, 21 deaths from zymotic diseases were registered. This number was 5 below the average for the corresponding week of the last ten years. The 21 deaths comprise 1 from scarlet fever (scarlatina), 2 from influenza and its complications, 1 from whooping-cough, 2 from diphtheria, 7 from enteric fever, 1 from choleraic diarrhœa, 3 from diarrhœa, and 1 from erysipelas.

The cases of scarlatina admitted to hospital numbered 27, being 5 in excess of the admissions in the preceding week, and 6 over the number for the week ended October 2. Twenty scarlatina patients were discharged, and 122 remained under treatment on Saturday, being 7 over the number in hospital at the close of the preceding week. This number is exclusive of 25 convalescents at Beneavin, Glasnevin, the Convalescent Home of Cork-street Fever Hospital.

Twenty-nine cases of enteric fever were admitted to hospital, being 5 over the admissions in the preceding week, but 9 under the number for the week ended October 2. Thirteen patients were discharged, 3 died, and 132 remained under treatment on Saturday, being 13 over the number in hospital on that day week.

Deaths from diseases of the respiratory system, which had fallen from 29 for the week ended October 2 to 22 in the following week, rose to 30, or 8 over the average for the corresponding week of the last ten years. The 30 deaths comprise 17 from bronchitis, 7 from pneumonia, and 2 from croup.

In the week ending Saturday, October 23, the mortality in thirty-three large English towns, including London (in which the rate was 16·8), was equal to an average annual death-rate of 16·9 per 1,000 persons living. The average rate for eight principal towns of Scotland was 20·3 per 1,000. In Glasgow the rate was 21·8, and in Edinburgh it was 18·1.

The average annual death-rate in the twenty-three principal town districts of Ireland was 19·0 per 1,000 of their aggregate population.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 2·0 per 1,000, the rates varying from 0·0 in eleven of the districts to 11·3 in Newtownards—the 5 deaths from all causes registered in that district comprising 1 from measles and 1 from diarrhœa. Among the 97 deaths from all causes registered in Belfast are 1 from whooping-cough, 2 from simple continued and ill-defined fever, 4 from enteric fever, and 3 from diarrhœa. The 27 deaths in Cork comprise 1 from enteric fever and 2 from diarrhœa. Of the 7 deaths in Newry 1 was caused by measles and 1 by diarrhœa. The 5 deaths in Lurgan comprise 2 from diarrhœa.

In the Dublin Registration District the registered births amounted to 188—91 boys and 97 girls; and the registered deaths to 142—64 males and 78 females.

The deaths, which are 11 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 21·2 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 20·3 per 1,000. During the forty-two weeks of the current year, ending with Saturday, October 23, the death-rate averaged 29·9, and was 3·2 over the mean rate in the corresponding period of the ten years 1887–1896.

The number of deaths from zymotic diseases registered was 18, being 5 below the average for the corresponding week of the last ten years, and 3 under the number for the previous week. The 18 deaths comprise 1 from measles, 2 from scarlet fever (scarlatina),

1 from whooping-cough, 1 from diphtheria, 6 from enteric fever, 1 from cholera infantum, and 2 from diarrhœa.

The weekly number of cases of scarlatina admitted to hospital rose to 34. Twelve scarlatina patients were discharged, 2 died, and 142 remained under treatment on Saturday, being 20 over the number in hospital at the close of the preceding week. This number is exclusive of 25 convalescents at Beneavin.

Thirty-one cases of enteric fever were admitted to hospital, against 29 in the preceding week. Twenty-two patients were discharged, 2 died, and 139 remained under treatment on Saturday, being 7 over the number in hospital on that day week.

The hospital admissions included also 2 cases of typhus. They were the only cases of the disease in hospital on Saturday.

Diseases of the respiratory system caused 31 deaths, being 7 in excess of the average for the corresponding week of the last ten years, and 1 over the number for the previous week. The 31 deaths comprise 18 from bronchitis, 7 from pneumonia, and 3 from croup.

In the week ending Saturday, October 30, the mortality in thirty-three large English towns, including London (in which the rate was 17·7), was equal to an average annual death-rate of 17·6 per 1,000 persons living. The average rate for eight principal towns of Scotland was 19·9 per 1,000. In Glasgow the rate was also 19·9, and in Edinburgh it was 18·5.

The average annual death-rate represented by the deaths registered in the twenty-three principal town districts of Ireland was 22·7 per 1,000 of the population.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 2·3 per 1,000, the rates varying from 0·0 in thirteen of the districts to 11·3 in Newtownards—the 5 deaths from all causes registered in that district comprising 2 from measles. Among the 131 deaths from all causes registered in Belfast are 3 from whooping-cough and 11 from enteric fever. Two of the 18 deaths in Cork were from diarrhœa. Among the 12 deaths in Waterford are 2 from whooping-cough and 1 from diarrhœa, and the 4 deaths in Dundalk comprise 1 from simple continued fever and 1 from diarrhœa. The Registrars of Tralee Nos. 1 and 2 Districts report the presence of scarlatina of a mild type in their districts.

In the Dublin Registration District the registered births amounted to 210—97 boys and 113 girls; and the registered deaths to 189—101 males and 88 females.

The deaths, which are 27 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 28·2 in every 1,000 of the population. Omitting the deaths (numbering 11) of persons admitted into public institutions from localities outside the district, the rate was 26·5 per 1,000. During the forty-three weeks of the current year, ending with Saturday, October 30, the death-rate averaged 29·9, and was 3·3 over the mean rate in the corresponding period of the ten years 1887-1896.

The number of deaths from zymotic diseases registered was 20, being 2 over the number for the preceding week, but 5 under the average for the forty-third week of the last ten years. The 20 deaths comprise 2 from scarlet fever (*scarlatina*), 1 from diphtheria, 1 from simple continued fever, 9 from enteric fever, 5 from diarrhoea, and 1 from erysipelas.

Thirty-six cases of *scarlatina* were admitted to hospital, against 34 in the preceding week. Thirty-four *scarlatina* patients were discharged, 1 died, and 143 remained under treatment on Saturday, being 1 over the number in hospital at the close of the preceding week. This number is exclusive of 25 convalescents at Beneavin.

The number of cases of enteric fever admitted to hospital was 26, being 5 under the admissions in the preceding week. Fourteen patients were discharged, 1 died, and 150 remained under treatment on Saturday, being 11 over the number in hospital on that day week.

The hospital admissions included, also, 1 case of typhus: 3 cases of the disease remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system rose to 40, or 13 in excess of the average for the corresponding week of the last ten years. They comprise 23 from bronchitis and 15 from pneumonia.

In the week ending Saturday, November 6, the mortality in thirty-three large English towns, including London (in which the rate was 18·5), was equal to an average annual death-rate of 18·1 per 1,000 persons living. The average rate for eight principal towns of Scotland was 18·8 per 1,000. In Glasgow the rate was 20·1, and in Edinburgh it was 17·4.

The average annual death-rate in the twenty-three principal town districts of Ireland was 20·9 per 1,000 of the population.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 2·5 per 1,000, the

rates varying from 0·0 in eleven of the districts to 11·3 in Newtownards—the 7 deaths from all causes registered in that district comprising 1 from measles and 1 from diarrhœa. Among the 124 deaths from all causes registered in Belfast are 5 from whooping-cough, 1 from diphtheria, 9 from enteric fever, and 2 from diarrhœa. The 29 deaths in Cork comprise 1 from measles, 1 from diphtheria, and 4 from diarrhœa. Among the 17 deaths in Limerick are 1 from each of the following—diphtheria, enteric fever, and diarrhœa. Of the 7 deaths in Clonmel 2 were from enteric fever.

In the Dublin Registration District the registered births amounted to 190—88 boys and 102 girls; and the registered deaths to 144—88 males and 56 females.

The deaths, which are 40 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 21·5 in every 1,000 of the population. Omitting the deaths (numbering 8) of persons admitted into public institutions from localities outside the district, the rate was 20·3 per 1,000. During the forty-four weeks of the current year, ending with Saturday, November 6, the death-rate averaged 29·7, and was 3·1 over the mean rate in the corresponding period of the ten years 1887–1896.

Only 14 deaths from zymotic diseases were registered, being 12 below the average for the corresponding week of the last ten years, and 6 under the number for the previous week. They comprise 1 from influenza, 1 from whooping-cough, 2 from diphtheria, 8 from enteric fever, and 1 from diarrhœa.

The weekly number of cases of scarlatina admitted to hospital, which had gradually risen from 22 in the week ended October 9 to 36 in the week ended October 30, fell to 17. Seventeen scarlatina patients were discharged, 1 died, and 142 remained under treatment on Saturday, being 1 under the number in hospital at the close of the preceding week. This number is exclusive of 25 convalescents at Beneavin.

Forty-three cases of enteric fever were admitted to hospital against 26 in the preceding week, and 31 in the week ended October 23. Twenty-three patients were discharged, 4 died, and 166 remained under treatment on Saturday, being 16 over the number in hospital on that day week.

The hospital admissions included, also, 1 case of typhus: 3 cases of the disease remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system fell to 33, or 1 under the average for the corresponding week of the last ten years. The 33 deaths consist of 13 from bronchitis, 16 from pneumonia, and 4 from croup.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. $53^{\circ} 20'$ N., Long. $6^{\circ} 15' W.$, for the Month of October, 1897.

Mean Height of Barometer, -	-	-	30.096 inches.
Maximal Height of Barometer (on 21st, 9 a.m.),			30.561 „
Minimal Height of Barometer (on 16th, 2 a.m.),			29.074 „
Mean Dry-bulb Temperature,	-	-	51.1° .
Mean Wet-bulb Temperature,	-	-	49.4° .
Mean Dew-point Temperature,	-	-	47.6° .
Mean Elastic Force (Tension) of Aqueous Vapour,			.331 inch.
Mean Humidity, -	-	-	88.4 per cent.
Highest Temperature in Shade (on 17th),	-		62.9° .
Lowest Temperature in Shade (on 12th),	-		36.1° .
Lowest Temperature on Grass (Radiation) (on 12th),	-	-	33.0° .
Mean Amount of Cloud,	-	-	52.4 per cent.
Rainfall (on 14 days),	-	-	2.110 inches.
Greatest Daily Rainfall (on 14th),	-	-	.637 inch.
General Directions of Wind,	-	-	E., S.E., W.

Remarks.

Quite unlike the cold Octobers of 1894, 1895, and 1896, this month was strangely genial and fine—nay more, the temperature of the air actually rose towards the close, thus reversing the seasonal range for the time of year. The weather of the second week was, indeed, rough and wet; but this only accentuated the quietness and mildness of the beginning and end of the month. These features were due to the prevalence of anticyclonic conditions over Western and Central Europe, Ireland getting the benefit of the warmth attending the southerly winds of the area of high atmospheric pressure.

In Dublin the arithmetical mean temperature (52.3°) was much above the average (49.7°); the mean dry bulb readings at 9 a.m. and 9 p.m. were 51.1° . In the thirty-two years ending with 1896, October was coldest in 1892 (M. T. = 44.8°), and in 1896 (M. T. = 45.0°). It was warmest in 1876 (M. T. = 53.1°). In 1895 the M. T. was only 46.2° .

The mean height of the barometer was 30.096 inches, or 0.256 inch above the corrected average value for October—namely, 29.840 inches. The mercury rose to 30.561 inches at 9 a.m. of the 21st, and fell to 29.074 inches at 2 a.m. of the 16th. The

observed range of atmospheric pressure was, therefore, as much as 1·487 inches.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was $51\cdot1^{\circ}$, or only $1\cdot9^{\circ}$ below the value for September. The arithmetical mean of the maximal and minimal readings was $52\cdot3^{\circ}$, compared with a twenty-five years' average of $49\cdot7^{\circ}$. Using the formula, *Mean Temp.* = *Min.* + (*Max.* - *Min.* \times $\cdot 485$), the value was $52\cdot1^{\circ}$, or $2\cdot6^{\circ}$ above the average mean temperature for October, calculated in the same way, in the twenty-five years, 1865-89, inclusive ($49\cdot5^{\circ}$). On the 17th the thermometer in the screen rose to $62\cdot9^{\circ}$ —wind, S.; on the 12th the temperature fell to $36\cdot1^{\circ}$ —wind, W.N.W. The minimum on the grass was $33\cdot0^{\circ}$, also on the 12th. The thermometer did not sink to or below 32° in the screen, or even on the grass.

The rainfall was 2·110 inches, distributed over 14 days—the rainfall and the rainy days were decidedly below the average. The average rainfall for October in the twenty-five years, 1865-89, inclusive, was 3·106 inches, and the average number of rainy days was 17·6. In 1880 the rainfall in October was very large—7·358 inches on 15 days. In 1875, also, 7·049 inches fell on 26 days. On the other hand, in 1890, only ·639 inch fell on but 11 days; in 1884, only ·834 inch on but 14 days; and in 1868 only ·856 inch on 15 days.

Lightning was seen on the night of the 15th-16th. High winds were noted on 9 days, and attained the force of a gale on three occasions—the 10th, 16th, and 17th. The atmosphere was more or less foggy in Dublin on the 1st, 2nd, 13th, 14th, 20th, 21st, 28th, 30th, and 31st. Hail fell on the 10th. A lunar halo appeared on the 7th. A solar halo was seen on the 28th.

Friday, the 1st, was at first foggy and cloudy, afterwards fine and mild. On Saturday, the 2nd, rain fell at intervals—heavily for an hour in the forenoon and still more heavily in the afternoon—the total measurement was ·293 inch.

Generally favourable weather prevailed during the week ended Saturday, the 9th, which was signalised by a cold snap of some intensity on the Continent and also in England, Ireland and Scotland entirely escaping it owing to the prevalence of S.W. and W. winds and cloudy skies. On Sunday an anticyclone lay off the W. of Ireland, where the barometer stood above 30·4 inches, and a V-shaped depression was found over the North Sea. The latter system had caused a considerable fall of rain during the previous 24 hours, first in Ireland and later on in England. The weather

after this remained very fine until Tuesday evening, when rain fell in Ireland, as a large tongue of high atmospheric pressure formed over the Baltic, North Sea, and England, steepening gradients for S. and S.W. winds in Ireland and Scotland and causing a cold N.E. wind to spring up all over Central Europe. Calms, fogs, and low temperatures set in over England, and a continuous fall of snow occurred at Munich, freezing weather being felt all over Germany, Switzerland, and France. On Thursday night the thermometer fell to 28° in the shade in Paris and at Belfort. Towards the close of the week a new area of high atmospheric pressure was in course of formation off the S.W. of Ireland, in which country temperature was giving way while the weather became fine and dry although cloudy. The mean height of the barometer in Dublin was 30.305 inches, pressure ranging between 30.474 inches at 9 a.m. of Monday (wind, W.N.W.) and 30.070 inches at 1 p.m. of Friday (wind, W.N.W.). The corrected mean temperature was 51.7° . The mean dry bulb reading at 9 a.m. and 9 p.m. was 50.7° . On Monday the screened thermometers fell to 42.1° , on Thursday they rose to 59.2° . The rainfall was .187 inch on three days, .140 inch being measured on Tuesday. The prevalent winds were W.N.W. and S.W.

Very unsettled weather prevailed throughout the week ended Saturday, the 16th. Until Wednesday the British Islands were affected by a large depression, which was found near the Shetlands on Sunday morning and moved slowly thence to Scandinavia, becoming deeper and spreading out southwards as it travelled. By 8 a.m. of Tuesday the barometer had fallen to 28.97 inches at Christiansund, on the W. coast of Norway, near the centre of the depression. At first this system caused strong westerly winds, clouds and some rain in most districts, temperature being rather high on Sunday (Dublin, Loughborough and Leith recording 60° , Aberdeen 63°). As the disturbance moved eastward, however, the wind drew into N.W. and N. and the air became much colder, raw and searching. On Monday night the thermometer in the screen fell to 31° at Parsonstown, and 36° in Dublin. Hail, sleet, and snow fell in Scotland on Tuesday. On Wednesday morning, while the cold N.W. winds of the northern depression were still blowing in that country, a new depression appeared off the S.W. of Ireland. Under its influence the wind shifted to E., S.E., or S. over the southern half of the United Kingdom, and temperature rose considerably, while rain fell heavily in Ireland, and in the N.W. and N.E. of England, from time to time. Scotland came within the sphere of the

southwestern depression on Friday, so that an easterly gale and heavy rainfall occurred. Lightning was seen on Friday night. During the last three days abrupt changes from foul to fair weather took place, particularly in and near Dublin. In this city the mean height of the barometer was 29·709 inches, the range being from 30·069 inches at 9 a.m. of Sunday (wind, W.), to 29·074 inches at 2 a.m. of Saturday (wind, S.). The corrected mean temperature was 49·9°. The mean dry bulb temperature at 9 a.m. and 9 p.m. was 49·3°. On Sunday the screened thermometers rose to 59·8°, on Tuesday they fell to 36·1°. The rainfall was 1·302 inches on six days, ·637 inch being measured on Thursday. The prevalent winds were W.N.W. and S.S.E.

Opening with unsettled, very rough weather, the week ended Saturday, the 23rd, proved extremely fine and quiet. The change was brought about by the spreading northwestwards and northwards of an anticyclone, which was already forming over Central Europe early on Sunday. At that time a large and deep depression was travelling in a northerly direction across Ireland, where a heavy southerly gale was blowing while rain fell in large quantities—the measurements at 8 a.m. were ·77 inch at Parsonstown, 1·40 inches at Roche's Point and 1·43 inches at Valentia Island. In Dublin the gale continued to blow for several hours, but the weather became bright and warm at 11 20 a.m., the shade thermometer rising to 62·9°. Gradients for S.W. winds were still rather steep but decreasing, so that the weather became fine and warm as the day advanced. On Tuesday anticyclonic conditions were fully established, the wind died down and calms and fogs became prevalent, especially at night. In the daytime there was hot sunshine, so that the diurnal range of temperature was unusually large. On Thursday the screened thermometer at Nairn, in the N.E. of Scotland, rose to 66°, while it fell to 32° during the ensuing night—a range of 34° within a few hours. From Thursday evening to the close of the week easterly and southeasterly breezes prevailed, and clouds increased on Saturday from S.E. At this time the barometer was falling decidedly in the south. In Dublin the mean atmospheric pressure equalled 30·215 inches, the range being from 29·403 inches at 9 a.m. of Sunday (wind, S. by W., blowing a gale), to 30·561 inches at 9 a.m. of Thursday (wind, W., light). The corrected mean temperature was 52·2°. The mean dry bulb reading at 9 a.m. and 9 p.m. was 50·0°. On Sunday the screened thermometers rose to 62·9°, on Thursday they fell to 38·1°. Rain fell on Sunday to the amount of ·155 inch. The prevalent winds were at first S.W., then E.S.E.

Generally favourable weather was experienced in the week ended Saturday, the 30th. In the London district, however, rain fell on Monday and Tuesday and fog and gloom were very prevalent until Friday, which was bright and very warm. In Dublin conditions were at first much finer, and summerlike warmth was enjoyed on Wednesday, Thursday, and Friday. Saturday, on the contrary, proved dull, damp, and rainy as well as foggy at times. An anticyclone, of which mention was made in last week's report, held its position over the south of Scandinavia, Denmark, and Germany; but depressions appeared to be passing northwards across the Atlantic outside the West of Ireland after Monday. This distribution of atmospheric pressure caused strong southerly winds and warmth in Ireland. On Thursday night a strong southerly gale blew at Belmullet. On Saturday the barometer rose in Ireland, equalising pressure, so that calm, foggy and finally cooler weather set in. The change was accompanied by a fall of rain. In Dublin the corrected mean height of the barometer was 30·116 inches, pressure ranging between 30·252 inches at 9 a.m. of Sunday (wind, E.), and 29·893 inches at 9 p.m. of Friday (wind, S.S.E.). The corrected mean temperature was 54·0°. The mean dry bulb reading at 9 a.m. and 9 p.m. was 53·6°. On Tuesday the screened thermometers fell to 45·2°, on Thursday they rose to 60·8°. The rainfall was ·173 inch, on three days, ·091 inch being measured on Saturday. The prevailing winds were E. and S.S.E. A solar halo was seen on Thursday. The mean temperature was about the same as that of the week ended Saturday, September 4, 1897.

Sunday, the 31st, was very fine and genial.

The rainfall in Dublin during the ten months ending October 31st amounted to 24·081 inches on 179 days, compared with 12·366 inches on 123 days during the same period in 1887 (the dry year), 23·716 inches on 146 days in 1895, 22·052 inches on 165 days in 1896, and a twenty-five years' average of 22·840 inches on 160·4 days.

At Knockdolian, Greystones, Co. Wicklow, the rainfall in October amounted to 3·160 inches on 13 days. Of this quantity ·900 inch fell on the 14th, and ·690 on the 16th. The rainfall at Greystones in October, 1889, was no less than 6·935 inches on 22 days, or more than 11 times as great as the fall in October, 1890, when only ·600 inch fell on 13 days. From January 1st, 1897, up to October 31st, rain fell at Knockdolian on 171 days to the total amount of 32·730 inches. In 1892, the rainfall of the corresponding ten months was 27·223 inches on 140 days; in 1893, 17·801 inches

on 133 days; in 1894, 32·221 inches on 154 days; in 1895, 26·270 inches on 131 days, and in 1896, 27·837 inches on 137 days.

At Cloneevin, Killiney, Co. Dublin, the rainfall in October was 2·280 inches on 11 days, compared with ·710 inch on 14 days in 1893, 6·460 inches on 17 days in 1894, 2·650 inches on 14 days, in 1895, 5·230 inches on 21 days in 1896, and a twelve years' average (1885–1896) of 3·388 inches on 16·2 days. On the 14th, ·67 inch fell. Since January 1, 1897, 25·19 inches of rain have fallen at this station on 169 days.

At the National Hospital for Consumption, Newcastle, Co. Wicklow, the rainfall in October was 3·175 inches on 13 days. Of this quantity ·970 inch was recorded on the 14th, and ·650 inch on the 16th. The highest temperature in the screen was 62·0° on the 2nd, the lowest was 37·8° on the 12th. At this climatological station the rainfall from January 1 to October 31, inclusive, amounted to 30·664 inches on 157 days.

Corrigenda in the Report for August, 1897.

The mean height of the barometer should be 29·709 inches (not 29·708 inches). Par. 3, line 1, for "29·708 inches, ·189 inch," read "29·709 inches, ·188 inch." Par. 9, line 18, for "29·584," read "29·588."

EFFECTS OF ALCOHOL ON YEAST.

C. F. HODGE, Ph.D., Professor of Physiology in Clark University (*Medical Pioneer*, November 1897), has tried a number of experiments to test the action of alcohol on the growth of yeast. Yeast is able to grow until, by decomposition of sugar, its medium comes to contain 14 per cent. of common alcohol. At this point, no matter how much sugar and other materials remain, further growth is impossible. Four possibilities exist—(1.) That the growth of the yeast should continue until the 14 per cent. of alcohol is formed, and that then it should suddenly cease; (2.) That as the alcohol forms, the growth of yeast should *pro rata* lessen; (3.) That at first alcohol should stimulate the growth and afterwards lessen it (this is the theory on which many alcohol drinkers justify their practice); and (4.) That the first minute traces of alcohol should largely check the growth of the yeast. The last alternative Dr. Hodge finds to be the true one; $\frac{1}{10000}$ per cent. (1 in 100,000) caused a considerable retardation of growth, over half as much as ten times as much alcohol caused, and about a fifth as much as a hundred times as much alcohol caused. The curve when plotted out resembles that obtained from the fatigue of muscle or nerve cell.

PERISCOPE.

INTERNATIONAL LEPROSY CONFERENCE, BERLIN, 1897.

At the close of the debates of the International Leprosy Conference, Berlin, 1897, the Secretaries present the following short Report of the general conclusions of the Conference. They believe that such a *résumé* will be especially desirable for those members who have been delegated by their respective Governments, and who have to make reports on the results of the Conference. As might be expected, a considerable portion of the discussion has related to the *Bacillus lepræ*, which the Conference accepts as the virus of leprosy, and which for upwards of twenty-five years has been known to the scientific world through the important discovery of Hansen and the able investigations of Neisser. The conditions under which the bacillus grows and develops are still unknown, as well as the manner in which it invades the human system; but from the discussions of the Conference, it seems probable that an unanimity of opinion will soon prevail in reference to its modes of subsequent dissemination within the human body. Very interesting observations have been brought forward in connection with the elimination of the bacilli in large quantities by means of the skin and the nasal and buccal mucous membranes of lepers; it is desired that such observations be confirmed where opportunities occur. The question is of very great importance to those who are entrusted with the care of the Public Health, as leprosy is now acknowledged to be a contagious disease. Every leper is a danger to his surroundings, the danger varying with the nature and extent of his relations therewith, and also with the sanitary conditions under which he lives. Although, among the lower classes, every leper is especially dangerous to his family and fellow workers, cases of leprosy appear in the higher social circles also. The theory of heredity of leprosy is now further shown to have lost ground, in comparison with the at present generally accepted theory of its contagiousness. The treatment of leprosy has had only palliative results up to the present time. Serum therapy has so far been unsuccessful. In view of the virtual incurability of leprosy and the serious and detrimental effects which its existence in a community causes, and considering the good results which have followed the adoption of legal measures of isolation in Norway, the Leprosy Conference, as a logical issue of the theory that the disease is contagious, has adopted the following resolution proposed by Dr. Hansen, and seconded by Dr. Besnier:—"1. In those countries, where leprosy forms foci, or has a great extension, we have in

isolation the best means of preventing the spread of the disease. 2. The system of obligatory notification, of observation and isolation, as carried out in Norway, is recommended to all nations with local self-government and a sufficient number of physicians. 3. It should be left to the legal authorities, after consultation with the medical authorities, to take such measures as are applicable to the special social conditions of the districts." The Report is signed by the Secretaries of the Conference, namely—Phin. S. Abraham, London; Ed. Arning, Hamburg; A. von Bergmann, Riga; E. Dubois Havenith, Brussels; J. J. Kinyoun, Washington; G. Thibierge, Paris; Edv. Ehlers, Copenhagen, General Secretary.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

"Soloids" for Gynæcological Practice.

MESSRS. BURROUGHS, WELLCOME & Co., of Snow Hill Buildings, London, E.C., and 108 Pitt-street, Sydney, have recently prepared three "soloids" which cannot fail to be of use to gynæcologists. These compressed drugs for the instantaneous preparation of irrigations in uterine or vaginal maladies will be cordially welcomed by both physician and patient. They are the following:—

"Soloid" Zinc and Tannin Compound.—Each "soloid" contains—zinc sulphate, 5 grs.; lead acetate, 10 grs.; extract of opium, 2 grs.; tannin, 1 gr. One "soloid" or more, according to the necessities of the case, may be dissolved in sufficient warm water. This makes a very efficient irrigation when both sedative and astringent effects are desired. These "soloids" are supplied to the medical profession in bottles of 25, at 1s. 3d. per bottle.

"Soloid" Sodium Biborate Compound.—Each "soloid" contains—sodium biborate, 20 grs.; opium tincture, 10 minims. One "soloid" to four, dissolved in a pint of lukewarm water, forms a suitable solution, mildly alkaline, for use in the treatment of vaginal diseases of young persons and in cases attended by irritation or smarting of the neighbouring parts. They are supplied to the medical profession in bottles of 25, at 8d. per bottle.

In the chronic cases of adults the following "soloid" may be considered preferable:—

"Soloid" Alum Compound.—Each contains—zinc sulphate, 15 grs.; alum, 15 grs. A douche useful in chronic vaginal discharges is made by dissolving two to four in a pint of lukewarm water. They are supplied to the medical profession in bottles of 25, at 8d. per bottle.

In Memoriam.

HAUGHTON—O'GRADY—KING.

WITHIN as many weeks three of the ablest contributors to the columns of this Journal have passed into the "Silent Land." HAUGHTON, O'GRADY, KING—a trio, indeed, of Irish worthies whose place it will be hard to fill in the social, professional, and literary circles of Dublin life.

The REV. SAMUEL HAUGHTON, M.D. Univ. Dubl., Senior Fellow of Trinity College, Dublin; Fellow of the Royal College of Physicians of Ireland; F.R.S., M.R.I.A., D.C.L. Oxon., LL.D. Cantab. et Edin., passed away, aged seventy-five years, on October 31st. He was author of many scientific works, the best known, perhaps, being his "Principles of Animal Mechanics" and his "Lectures on Physical Geography." To the pages of this Journal he made the following communications:—

"Notes on Diabètes Insipidus." (Vol. XXXVI. Nov., 1863.)

"Specific Gravity of Urine." (Vol. XXXIX. Feb., 1865.)

"Mechanical Work done by the Human Heart." (Vol. XLIX. Feb., 1870.)

"Muscular Forces employed in Parturition." (Vol. XLIX. May, 1870.)

"Tuberculosis in the Large Carnivora." (Vol. LXVI. August, 1878.)

"Phantom Tumour simulating Pregnancy." (Vol. LXIX. April, 1880.)

"Canine Dumb-Madness." (Vol. LXXII. July, 1881.)

EDWARD STAMER O'GRADY, M.B., M.Ch., B.A. Univ. Dubl., F.R.C.S.I., M.R.C.P.I., M.R.I.A., died at his residence, 33 Merrion-square, Dublin, of septic pneumonia, on St. Luke's Day, October 18th. A staunch friend, a courtly gentleman, an able and fearless surgeon—such was O'Grady's character. As Senior Surgeon and

In Memoriam.

Lecturer on Clinical Surgery at Mercer's Hospital, he won for himself a high reputation. Probably no Dublin surgeon in recent years had more admirers in the ranks of the profession throughout Ireland than Mr. O'Grady.

His chief contributions to surgical literature found a place in this Journal. Of them the following list includes those which are best known:—

- "Ovariectomy." (Vol. LVIII. August, 1874.)
- "Vesical Catarrh." (Vol. LVIII. December, 1874.)
- "Notes of Surgical Cases." (Vol. LIX. April, 1875.)
- " " " " (Vol. LX. July, 1875.)
- "Popliteal Aneurysm." (Vol. LX. November, 1875.)
- "Amputation through the Hip-joint." (Vol. LXI. January, 1876.)
- "Amputation through the Shoulder-joint." (Vol. LXV. January, 1878.)
- "Trephining of the Skull." (Vol. LXV. March, 1878.)
- "Deformed Union after Fracture." (Vol. LXV. May, 1878.)
- "Strangulated Hernia." (Vol. LXXIX. January, 1885.)

HENRY KING, M.B. and M.A. Univ. Dubl., M.R.I.A., Fellow of the University of Madras, Deputy Surgeon-General of the Madras Army, died in his sixty-eighth year at his residence, 52 Lansdowne-road, Dublin, on November 6th. During his Indian career, which was highly distinguished, Dr. King had been for some time Principal of, and Professor of Medicine in, the Madras Medical College. He had acted as Editor of the *Madras Monthly Journal of Medical Science*, and in 1875 he published "The Madras Manual of Hygiene." Since he settled in Dublin, on his retirement from the Madras Medical Service, Dr. King was a constant contributor to our pages. His reviews were well written, candid, and exhaustive; his "Periscope" jottings were sprightly and clever. In these departments of the Journal in particular his many-sided talents will be sorely missed. Dr. King was a thorough Irishman, who loved his country dearly. Until he was overtaken by his fatal illness he was an active Fellow of the Royal Society of Antiquarians of Ireland, and his handsome presence was seldom missing from the "outings" of that scientific body.

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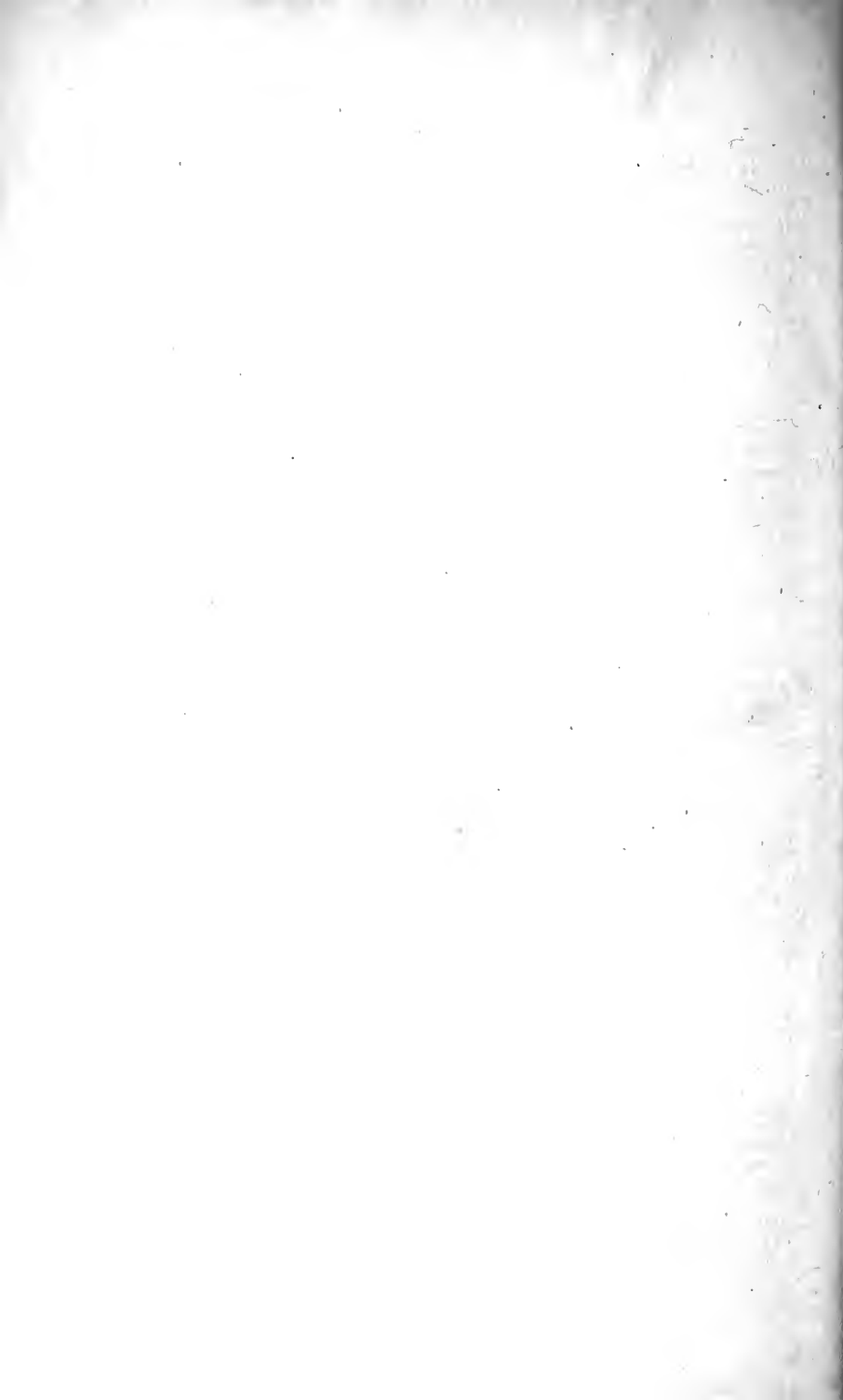
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VOL. CIV.
JULY TO DECEMBER, 1897.

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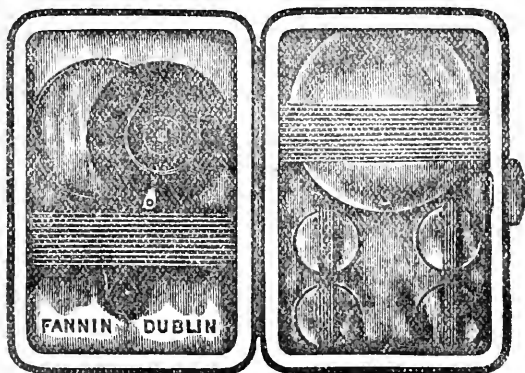
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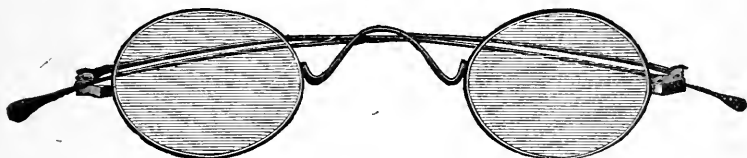
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These five-grain Tablets, which the patient can carry loose in a pocket and use without exciting attention, are commended by all the medical journals as the most convenient, portable, and agreeable digestive ever brought before the Profession. The taste of Pepsin is entirely eliminated. The digestive activity of the combination is unrivalled. Both these results have been brought about in the same way—by the perfection of chemical cleanliness attained *only* in the Lactopeptine laboratory.



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Is still supplied for the convenience of those who prefer to prescribe the original form, which is (*vide* "British Medical Journal" report) "kept fully up to date" of the most recent scientific developments. It has been before the profession in its successively improved forms nearly 30 years, and has received the commendations of the very highest authorities. No other combination of the digestive ferments can offer evidence of anything like similar efficiency.

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AWARDS

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First Order of Merit & Medal (Highest Award), Adelaide, 1887.
HIGHEST AWARD, Medical & Sanitary Exhibition, London, 1882.
First Order of Merit and Medal, Melbourne, 1888.

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The LANCET of March 25th, 1882, says:—

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"Benger's Food has by its excellence established a reputation of its own."

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